



Florida **HEALTH NOTES**

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AFTER AIR—WATER!

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1217 Pearl Street or P. O. Box 210
Jacksonville 1, Florida

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Florida **HEALTH NOTES**

DISCRIMINATION

Air, water, and food—in that order of importance—are the three basic essentials for man's existence. Every other feature of our life is to some degree, a luxury or an aid to environmental adjustment.

We have an abundant supply of air, still relatively pure, which we warm in winter, cool in summer, or condition in costly machines. In the search for food, we demand elaborate packaging of our daily groceries. Yet we who are so discriminating accept with childlike faith whatever water flows from our water taps.

That confidence is justified in many Florida cities—for the water is manufactured in clean, modern plants under careful control. In fact, a few water systems in Florida are equal or superior to the best anywhere in the United States. But in other Florida cities drinking water is distributed from dilapidated, untidy shacks. The inadequate equipment is in charge of untrained, indifferent persons. To such operators the periodic inspections by sanitary engineers are often nuisances to get by with as quickly as possible.

Quite often the State Board of Health and its affiliated county health departments have to resort to urgent measures—to seek reinforcements. In the fight for pure water, it is now time to seek everyone's help. It is asked that every citizen read the following report of a recent survey, that every citizen be informed, and that everyone join this fight. The only alternative is to run the constant risk of possible sickness, misery and death!

David B. Lee, Chief Sanitary Engineer,
Bureau of Sanitary Engineering.



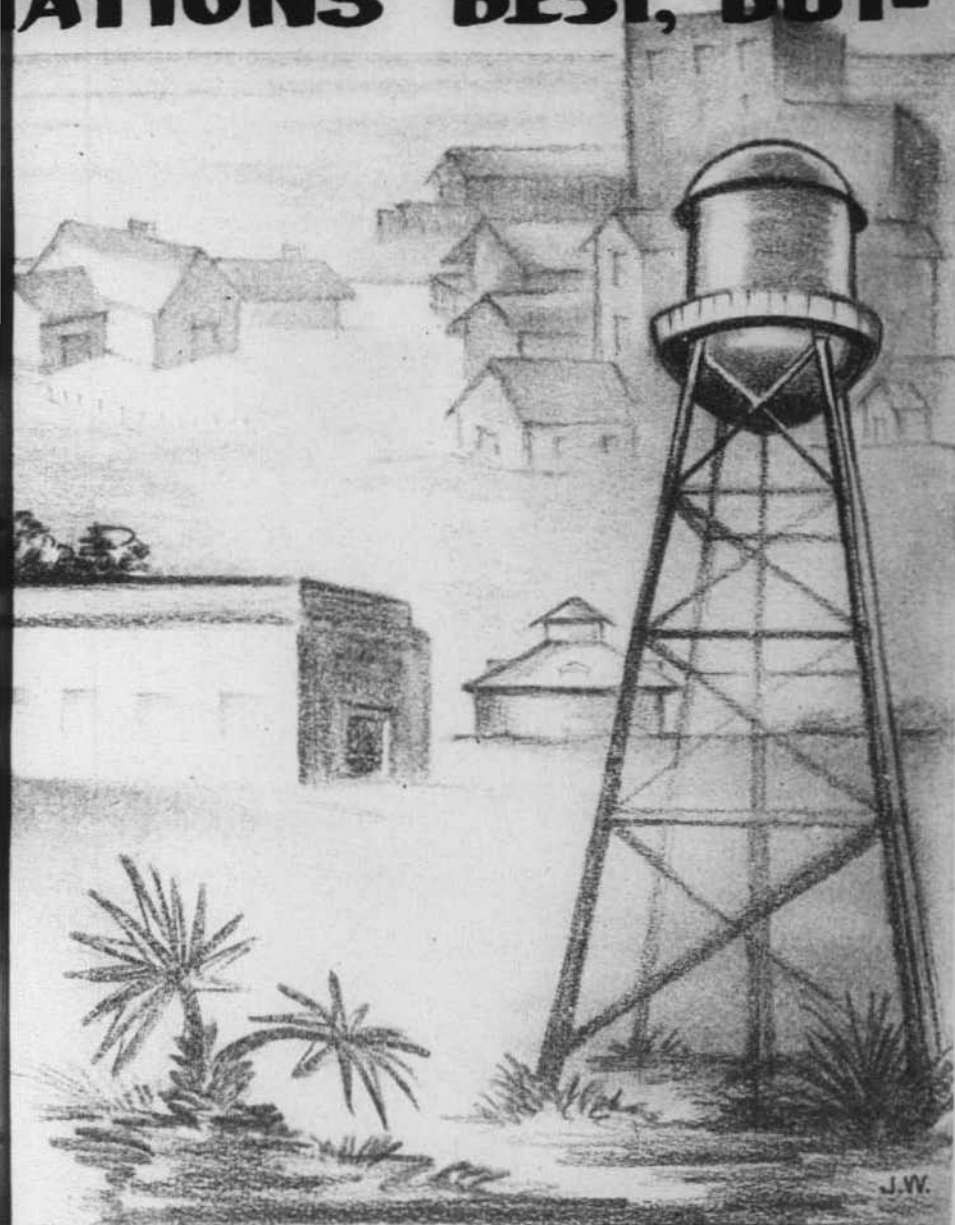
SOME FLORIDA EQUAL THE

Too long have we taken for granted that drinking water gushes forth from our kitchen taps in its pristine state as a gift of God. Basically that is true, but it is well to inquire about the intermediate handling between the Almighty and ourselves. This, then, is an interim report to the people of Florida on their public water supplies.

No pointed designation of the worst situation in Florida is made, though there are several candidates for that questionable distinction. Dye and salt brought to light one of the worst when bacteriological tests showed increasing pollution of the water wells. Salt was dumped into a nearby sinkhole filled with rotting sewage. In about ten hours, water from the well at the city water works—1½ miles from the sinkhole and 400 feet deep into limestone—began to show salt. A similar test with dye confirmed the source of pollution. Drastic action followed. A long-needed sewage treatment plant was built and a complete modern water treatment plant is now nearing completion. Meanwhile high-rate chlorine disinfection of the water supply is required.

Last spring in another Florida town, all citizens were warned to boil their drinking water. Radios and newspapers brought the dire news that the State Board of Health had found their water to be contaminated—with the same bacteria found in the human

WATER SUPPLIES ATION'S BEST, BUT-



bowel, generally accompanied by organisms causing enteritis, dysentery, and possibly typhoid.

Their water supply came from deep wells near a lake into which a neglected and broken-down sewer system was dumping floods of raw sewage. The inadequate, long-neglected sewage treatment plant was knowingly by-passed. The sewage, penetrating downward, found its way into the wells of the water works.

When rising bacteria counts were detected in the monthly water samples submitted to the State Board of Health Laboratory, emergency investigations followed and the water treatment plant was shut down. The town's water supply is now taken from more remote emergency wells which yield water that is made safe by heavy chlorination but very hard and not very palatable.

The half-million dollar water treatment plant stands idle—a useless investment so long as the only water supply available at the plant is too heavily polluted to use. The water treatment plant in this case was functioning well, but it could not remove the heavy load of pollution thrust upon it. The plant was designed to soften and improve a good water supply—not sewage. There is no mechanism which engineers can substitute for the fundamentals of sanitation.

This town was probably spared a serious epidemic by three factors:

- ★ a good water treatment plant temporarily handling a grossly polluted water supply.
- ★ regular bacteriological examinations of water samples submitted monthly to the State Board of Health Laboratory—
- ★ which permits water quality to be judged in a test tube rather than in the cemetery.
- ★ prompt cooperation by the city officials in following emergency recommendations of the State Board of Health.

WHOLEHEARTED EFFORTS NEEDED

A responsibility which the State Board of Health meets is the free bacteriological examination of water supplies—monthly or oftener when necessary. But it is the responsibility of local water works supervisors to collect the samples in sterile bottles furnished by the State and to forward them to the nearest branch

laboratory of the State Board of Health. Though it may seem unbelievable, water supply supervisors in some cities submit samples infrequently and at times apparently unwillingly.

One of those towns may be yours!

There are many water systems in Florida—too many for the small group of public health engineers to carry on the routine sampling which is the legal and moral responsibility of supervisors of each water supply system.

So much for the worst situations. What is it like at the best?

FLORIDA'S BEST WATER SUPPLIES —

On June 7, 1948, the water treatment plant of the City of Bradenton was designated by Dr. W. T. Sowder, State Health Officer, as the "Outstanding Water Treatment Plant for 1948." The water treatment plant of the City of St. Augustine was so close in second place that every good thing said of one reflects nearly equal praise on the other. Honorably mentioned and close behind were the West Palm Beach Water Company, the Town of Perry, and the St. Andrews Plant of Panama City.

AT BRADENTON

The city-owned water plant of Bradenton in Manatee County serves about 12,000 persons with completely treated water taken from a tributary of the Manatee River nearby. The plant, which has a maximum daily output of two million gallons, is taxed to capacity and will soon be enlarged. Plant management is under Mr. Thomas Paul, graduate chemist of the University of Florida and holder of a Class "B" Operator's certificate issued by the

Perhaps no one individual holds greater responsibility insofar as the health of a community is concerned, than does the operator of a public water supply.—Dr. Thomas Parran.

Florida Water and Sewage Works Operators Association (no higher grade certificate has yet been issued in Florida). In addition, all four of Mr. Paul's operators hold Class "C" or Class "B" certificates. The plant is always efficiently run, precisely controlled by hour-to-hour chemical analyses run in the Plant

laboratory and kept scrupulously clean. The bacterial quality of the water produced is as near perfect as can be checked.

The State Board of Health looks forward to the day when the same can be said of every system in the state. But—the story of today is not yet told. The plants above are exceptional—we must be more concerned with the average and below average water supply systems. Let us look then at the totals and the averages. But first—

WHAT IS A PUBLIC WATER SUPPLY?

Florida law defines a public water supply as any system serving more than 25 persons, regardless of ownership. Many of the small systems are known and supervised, yet every month brings discovery of a new one in some land development—a water system constructed without regard to the public health. At this point



A big reason why the Bradenton Water Works was designated "The Outstanding Water Treatment Plant of 1948" was excellent laboratory control. Here Chief Operator Thomas Paul in the Bradenton Water Works laboratory makes one of the numerous daily analyses. This day by day watchfulness on the part of the water works operators safeguards our water supplies, for it warns them when there is any danger.

it is worth mentioning that in subdivisions backed by the Federal Housing Administration minimum State health requirements are enforced, and most of the "wildcat" systems are unearthed early enough to forestall serious results.

One real hazard which the State Board of Health cannot directly control, however, exists in the numerous individual wells installed by developers in thickly settled suburban areas. For such systems the services of the State's laboratories are available at no charge (as are their advisory sanitation services) and every



This aerator at the beautiful plant of the West Palm Beach Water Company serves to remove the odor and taste of "sulphur" and the iron which causes red stains.

owner of a private supply is urged to call for such services through his county health department.

All in all, there are in Florida about 500 public water supplies serving more than 25 persons, excluding military bases. In the accounting which follows, however, figures are given only for those water systems serving at least 100 persons. There are 381

of these larger public water supplies, serving a total of 1,812,500 persons, or about 81 percent of the State's 1945 population. Of this number 289 are identified with single communities and can be called city or town supplies. The other 92 systems serve the larger subdivisions, mainly in Dade and Duval Counties, or large institutions.

CHLORINATION

Pure water from a good, safe water supply can be contaminated in a number of ways before it reaches your water tap. There is danger of contamination—

when a pump is opened for necessary repairs.

when a portable fire pump sets up a suction condition in the mains which may siphon raw sewage from imperfectly connected plumbing back into the mains.

when unknown and unreported cross connections exist—these connections with unsatisfactory supplies are prohibited, but are discovered from time to time by State Board of Health engineers or by local water department personnel.

when a main is opened for repair—contamination from polluted ground water, soil, or from leaky sewers is almost inevitable.

The fact that all these hazards occur **after** the water is drawn from its source emphasizes the need of an effective chlorine content to minimize these dangers. Even the regular bacteriological examinations made by the State Board of Health or by the water departments' own laboratories do not show pollution **until after it has occurred.**

CHLORINATION OF WATER when properly accomplished effects disinfection by means of small amounts of chlorine added to kill harmful bacteria. The amount of chlorine usually carried through the mains of a city is only about 13/1,000ths of an ounce in a thousand gallons of water. Popular belief to the contrary, the amount of chlorine used in water purification is not sufficient to endanger health or to make the water unpalatable. The tiny amount of chlorine present in the water combines with organic matter, including bacteria, in the mouth in such a way that you cannot swallow free chlorine at all.

Chlorine is also used to remove unpleasant tastes and odors present in some waters.

CROSS CONNECTIONS

occur when a valve, pipe, or any other device is placed between two water piping systems so that water from one can flow into the other. Cross connections are not permitted in Florida public water systems.

WHERE DOES FLORIDA'S WATER COME FROM?

Florida water supplies are derived from three type sources, each of which has certain general characteristics from the standpoint of public health. They are—

Surface Water—from lakes, rivers and ponds. Twenty-three plants serve 378,000 people with water from these sources.

Surface waters are almost invariably polluted to at least a slight degree and full treatment is necessary. On the credit side, these waters are usually soft—but are apt to be corrosive and at times may show a rather high organic color, taste, or odor. Several large Florida cities are using surface sources with satisfaction and safety—after proper treatment.

Shallow Ground Water—from wells driven into unconsolidated formations lying near the surface and nearly always geologically “young.” Nineteen plants draw water for 108,000 persons from this source.

Shallow well water is taken from the ground, but usually has reached its underground storage only recently and from a nearby source on the surface. Like surface water it is often polluted. Though often quite soft, it is usually more mineralized than surface water. Its color and taste is likely to be more acceptable than that of surface supplies.

Deep Ground Water—from wells drilled into one of the several artesian limestone formations which underlie the entire state at various depths. Obtaining water from these wells are 340 plants which serve 1,334,000 people.

Deep well water is usually quite highly mineralized and hard (principally because of the dissolved calcium salts it contains). It also frequently contains dissolved gases, one of which (hydrogen sulfide) smells like a rotten egg and turns silverware black. We call it “sulphur water.” An advantage of deep well water is that it may be quite free from disease-causing bacteria, **but not always**. In parts of Florida the limestone lies hundreds of feet below the surface, and the water in them has migrated horizontally many miles. In other great areas of the State, however, the limestone crops out at or near the surface and the water in it is subject to the same pollution influences as surface and shallow water. Systematic pollution in some counties has already degraded our most precious resource so far that many deep-seated water sources must now be regarded with as much suspicion as filthy surface ponds.

WHAT WATER DO YOU DRINK?

COMPLETELY TREATED?

1,000,000 persons or approximately 40 percent of the people of Florida drink water from various sources which is completely treated. This involves 47 water plants of several types using various chemical processes for reduction of hardness, color, or taste, including filtration and chlorination in every case.

DISINFECTED?

An additional 524,000 persons or about 20 percent of the people of Florida are served by 82 systems with water from various sources which is at least disinfected by chlorination.

UNTREATED?

289,000 persons or about 11 percent of the people of Florida are served from 254 systems with water which has no treatment at all, with the occasional exception of aeration to remove dissolved gases or iron. This substantial number, added to the 697,000 persons drinking water from various minor public water systems and from private wells, reveals that all in all—

APPROXIMATELY 986,000 OR FORTY PERCENT OF THE PEOPLE OF FLORIDA DRINK RAW WATER WITHOUT ANY TREATMENT.

A large number of these persons drink water which is at least occasionally polluted to some degree.

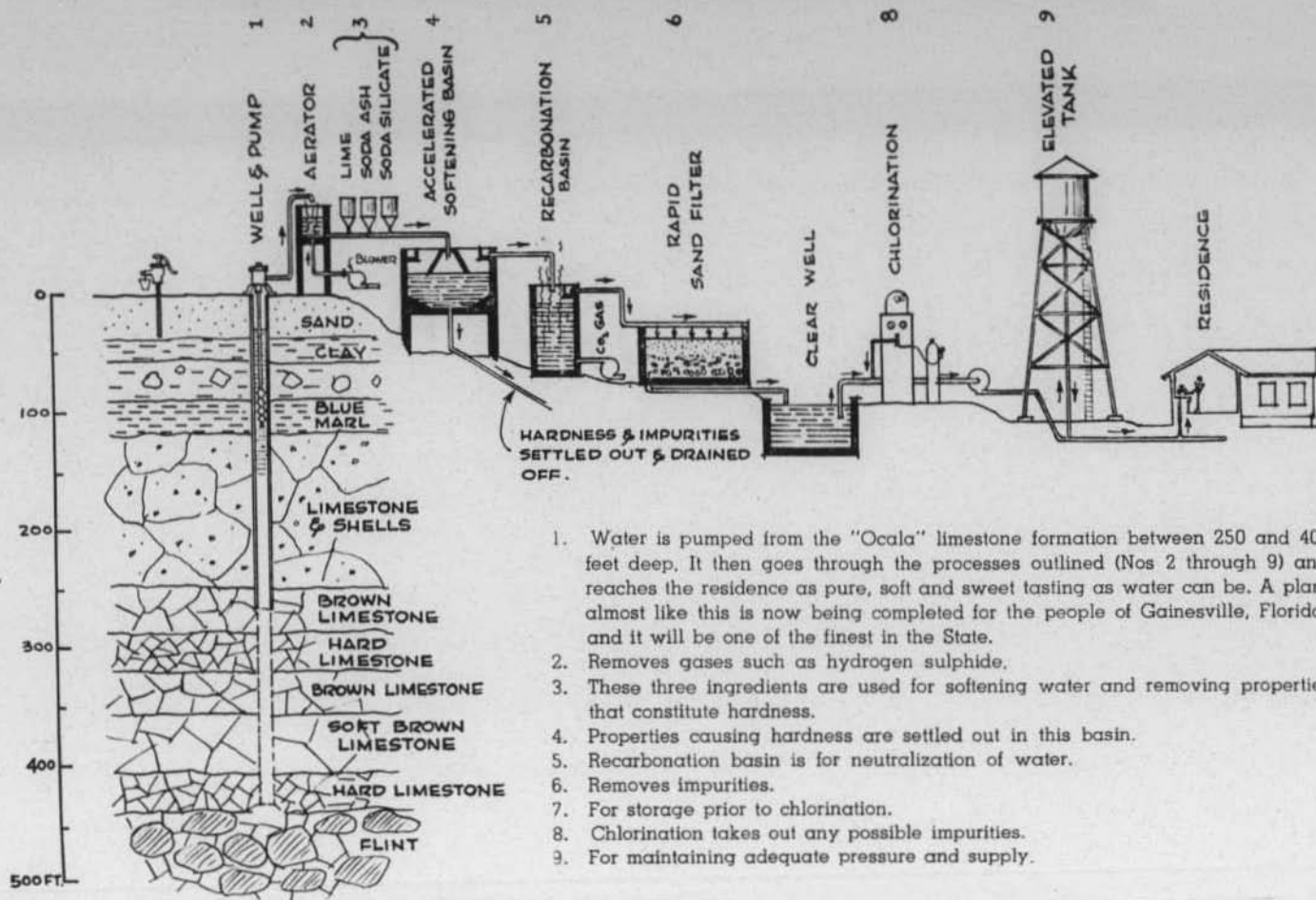
COAGULATION

of water means the addition of certain chemicals, such as alum or "water glass," to form a jelly-like "floc." As this floc settles and passes downward through the water, it drags such impurities as color, dirt and some bacteria with it. (Our grandmothers used the same principle by adding egg shells to "settle the grounds" out of boiled coffee).

AERATION

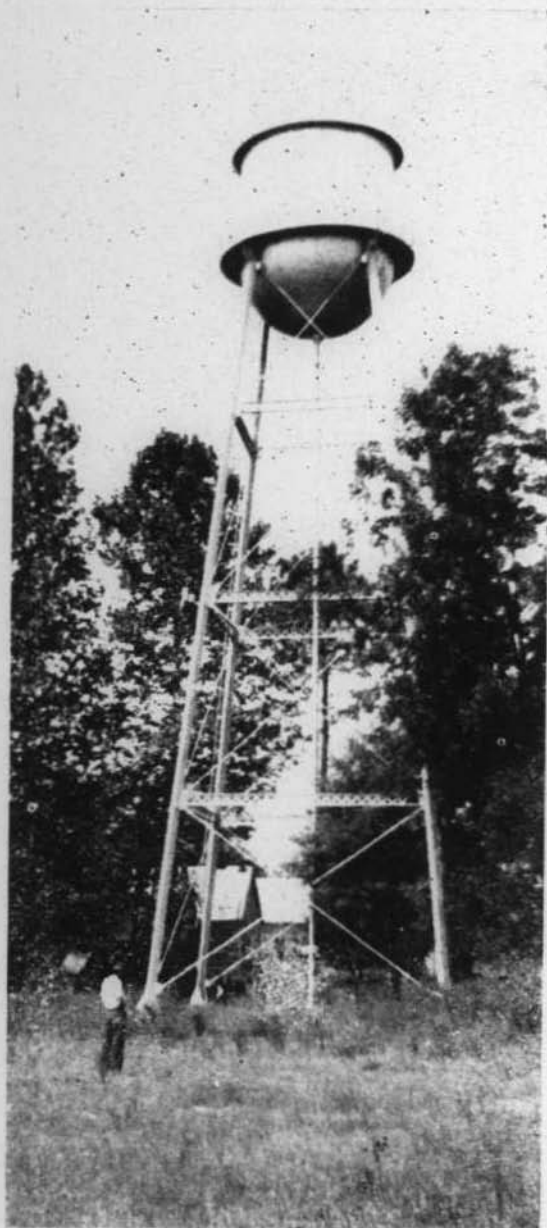
of water means mixing the water with air by means of spraying or mixing devices. The air helps remove objectionable gases, such as excess carbon dioxide which corrodes pipes and hydrogen sulfide which causes the typical "rotten-egg" taste and odor of "sulphur" water. Aeration also is useful in removing iron which causes red stains in porcelain basins and on clothing.

A MODERN FACTORY FOR PRODUCTION OF PURE WATER



1. Water is pumped from the "Ocala" limestone formation between 250 and 400 feet deep. It then goes through the processes outlined (Nos 2 through 9) and reaches the residence as pure, soft and sweet tasting as water can be. A plant almost like this is now being completed for the people of Gainesville, Florida, and it will be one of the finest in the State.
2. Removes gases such as hydrogen sulphide.
3. These three ingredients are used for softening water and removing properties that constitute hardness.
4. Properties causing hardness are settled out in this basin.
5. Recarbonation basin is for neutralization of water.
6. Removes impurities.
7. For storage prior to chlorination.
8. Chlorination takes out any possible impurities.
9. For maintaining adequate pressure and supply.

THIS TANK . . .



The people of this Florida community drink water coming from a pump housed in this dilapidated shack, surrounded by refuse and stagnant water. Such a water supply is unsafe.

. . LOOKS NICE —
B U T L O O K
U N D E R N E A T H
T H E T A N K



HOW IS YOUR WATER SUPPLY?

The figures presented above describe the situation for the state as a whole but bring out nothing of the extremes among the counties. In a Gulf coast county, for example, nearly 99 percent of the total population is served with water from 14 public systems. At the other extreme, a west Florida county, with a population in 1945 of about 3,000 has no public water system, or a nearby county where the one public supply serves only about 14 percent of the population. However, a north central county, where about 38 percent of the population are served by 7 public water systems, is typical of the entire state.

But here again we have figures that really tell us nothing unless we look at the individual systems that make up the story. State and county sanitary engineers have already looked; they made a survey of all Florida water supplies. Looking at their reports, we find these remarks about any number of public water systems:

In one plant—

AN IDLE LABORATORY

The plant is equipped with a chemical laboratory. Required records are not submitted to the State Board of Health and probably far too few chemical analyses are made to assure adequate operation control.

In another plant—

LOW EFFICIENCY

Efficiency of plant operation has not been as high as is desired and additional operating personnel, properly trained and certified, are needed.

In other Florida plants—

NOT ENOUGH WATER

The growth of the area served has outstripped growth of the distribution system and scattered water shortages have occurred.

IRREGULAR SAMPLES

It is believed that this plant delivers safe water, but in the absence of enough samples to confirm such an opinion it cannot be classified as satisfactory under Drinking Water Standards of the State Board of Health.

In other Florida plants—

CHLORINATION RECOMMENDED

The water is delivered exactly as it comes from the wells. The pumping stations are efficiently managed and kept very clean and sanitary. As long as the present good bacterial record so justifies, the State Board of Health will not compel chlorination. However, in this case, as in all others, chlorination is always recommended to keep a safe water supply.

SALT WATER DANGER

There is a potential danger of salt water intrusion into the city's limestone source of supply, if excessive rates of pumping develop. This problem is not just a local one and is now being studied exhaustively on a statewide basis by the Division of Water Surveys and Research of the State Board of Conservation.

GARBAGE COLLECTOR TOO

The pumping stations are clean and in good repair. The operator is interested in his work but he is also charged with repair of mains and roads and with collection of garbage. Regular bacteriological samples are consistently satisfactory. Unfortunately, this present supply shows signs of saline intrusion and investigations to discover another source are being made.

UNTREATED WATER

This plant serves about 1,200 persons with untreated water from two deep wells. The pumping stations are not very well maintained and are untidy. As is frequently the case, the operator has a myriad of other duties which leaves little time for attention to the town's most vital utility.

PRAISE FOR THE CHLORINATOR

The bacteriological record is excellent since the chlorinator was added in 1943. This plant delivers safe water from a source once found to be temporarily polluted.

GRUDGING COOPERATION

All (8 water systems) have bacteriological samples examined regularly by the State Board of Health. Some cooperate fully and some submit samples grudgingly. For the sake of positive safety all of these systems should be chlorinated.

FECAL POLLUTION

Salt intrusion into limestone aquifers is no problem here. Located on an upland, the limestone "spine" of the state is bare, and rain percolates downward into the porous formation through a thin cover of topsoil and sand. Years ago it was discovered that this downward drift of water could be speeded up by drilling a well, to funnel unwanted water down into the earth. The county seat city long used such wells for the disposal of raw sewage and in the same irresponsible manner, still disposes of partially treated sewage into the entire area's water supply. Thus it is no surprise that the city's three limestone water supply wells frequently show bacterial pollution originating from human and animal excrement.

POSSIBILITY OF CONTAMINATION

Only two other systems in the county are chlorinated, and the water for one of these is taken at the surface from a limestone sink rather than from wells. Except for this system and one other in the county none have the personnel nor the equipment to cope with a contaminated supply—and that contamination can occur.

MODERNIZATION ENCOURAGED

For service to 600 persons, water is pumped from a sinkhole in the limestone outcrop, chlorinated, and distributed through mains via a pressure tank. . . . The safety of this supply is dependent on constant attention, and the owner is being encouraged in his aim to work out a plan of modernization.

UNFIT FOR HUMAN CONSUMPTION?

This chlorinated supply was built by Army Engineers, is well equipped and maintained. However, since regular monthly bacterial samples are not submitted to the State Laboratories as required, the supply is necessarily classified under the Drinking Water Standards of the State Board of Health as unsatisfactory for human consumption.

PERSON IN CHARGE

The system is in charge of the Chief of Police who has little or no time to devote to it. The pumping station is generally grimy and the bacteriological history of the supply has not by any means been spotless.

CROSS CONNECTION

A recent investigation by the State Board of Health engineers disclosed a direct cross connection from the city's mains to an unsanitary private well, and the probable source of occasional slight pollution was eliminated. As the town officials have been too busy or too indifferent to take more than two sets of samples in the current year this is also classified as unsatisfactory for human consumption.

TIN SHANTY ABANDONED, BUT . . .

A new well is just now being provided which with its new pump-house will be a decided improvement over the littered tin shanty which was formerly used. Here again, no chlorination is practiced and samples are not submitted often enough to meet the standards for a supply satisfactory for human consumption under State Board of Health standards.

OBJECTIONABLE ODORS

Pressure and quality are hardly adequate—odors and tastes developing in the mains at times have been objectionable. The supply is bacteriologically satisfactory, however. The other system in the community is classed as unsatisfactory as the required bacterial samples are infrequently submitted.

SAME REASON AGAIN

The pump-house and well are of good construction, automatically operated and generally neglected. This water supply is classed by the State Board of Health as unsatisfactory for human consumption for the familiar reason that samples for bacteriological analysis are not submitted.

INDIFFERENCE

This system which serves about 2,000 of the city's residents derives its supply from a well about 500 feet deep. There is a reservoir built in 1918 which is in very bad condition and has been by-passed. Operation and maintenance which is under nominal supervision of the chairman of the town council is very poor. The premises are neglected and dirty and no samples for bacteriological examination have been submitted in months.

In view of such a record, the supply is entirely unsatisfactory for human consumption under State Board of Health standards. The sanitary engineer in that region recently has been too completely occupied with floods and other emergency work to overcome local negligence in this important matter. Here, again, no real improvement is expected until the people themselves protest at the indifferent handling of the most indispensable commodity in their daily lives.

PEOPLE APATHETIC

The situation in this county does not make a good report. Negligence in submission of bacterial samples is being followed up as rapidly as staff technical personnel can cover the territory (recognizing that this county is only one of 67 counties). However, experience proves that the same apathy will recur as soon as the engineer moves on to the next county—unless and until the people themselves demand minimum compliance with the sanitary regulations drawn for their protection. But this county is not the only one, nor the smallest, nor necessarily the worst.

WHAT CAN BE DONE?

That then is a hop-skip-and-jump view of Florida's public water supplies. It shows some of the best, much of the mediocre, some (but far too much) of the worst. The growing population of Florida and its cities is creating increasing problems of pollution. Pollution of streams and subsurface waters by industry is still growing. The situation apparently is going to get worse before it gets better—that is both a prophecy and a warning. We have already pointed out that at several Florida cities pollution has gone so far that there can no longer be any distinction between the quality of surface and subsurface waters.

CONSERVATION

Conservation of water supplies is a growing necessity in Florida, and the State Board of Health is cooperating in the current survey of water resources with the State Department of Conservation. Waste and pollution of our water must be stopped, and we are already too near the eleventh hour. A conservation program, when adopted, must recognize that control of quality

is inseparably a part of the picture, and that the people have a tremendous stake in cooperative regulation through their Board of Health.

COMPETENT OPERATORS

But abatement of pollution is not the whole answer. Given a pure source of supply, incompetent personnel in an insanitary plant can foul it again. Negligence has already ruined good supplies and may do it again. Negligence and incompetence have ruined several well-built plants in Florida. This is a wasteful squandering of the people's property.

ADEQUATE FACILITIES

The picture is not all bad though. Some of it is very bright. Two cities with previously bad supplies are building new plants in spite of the admitted financial difficulty which faces every municipality in the state. Wise legislation will enable other cities to do the same, provided the citizens are willing to pay only a fair market price for a commodity that is beyond price—pure water. That monthly price must include:

1. The cost of financing through revenue certificates
2. Good salaries for skilled operators
3. Reserves for expansion and replacement

Sewers and sewage treatment must be included, and sewer charges must be made a part of the water bill. The Supreme Court of Florida has emphatically stated that so doing is logical, constitutional and necessary (157 Fla. 726, 27 So. (2d) 118).

From that decision, which has become a leading case cited by attorneys throughout the nation, we quote the words of our justices:

A sewer system is complimentary to a water system. A sewer system would be of no value without a water system and a water system would be entirely incomplete without a sewer system. So the principles of law which would apply to one system must likewise apply to the other. . . .

The decision goes on to say in the end—

Private rights must always be subordinated to public rights and the public health is as sacred as any public rights can be.

The people of Florida must realize that the day of "cheap" water ended when homesteads were exempted from taxation. Free sewer service died the same day. We must have pure water and we must be willing to pay the price. We must realize also that the sewers and disposal plants for handling "used" water are part of the complete system and we must pay for sewer service too.

SOMETHING YOU CAN DO

Paying alone is not enough, not nearly enough. You should visit the water works of your city. It is your plant—if city owned. You have the right to see for yourself how the plant is operated no matter who owns it.

- ★ Tolerate no condition in your water works you would not allow in your own kitchen.
- ★ Ask to be shown the monthly reports of bacterial quality from your State Board of Health.
- ★ Ask to be shown the chlorinator and see how it works.
- ★ Insist that the plant operator be a certified technician whom you can entrust your life and health.
- ★ See that he is paid a salary commensurate with that high skill and trust.
- ★ Support your State Board of Health and county health department in a constant crusade for—

plant design by registered engineers
plant operation by certified personnel
perfect sanitation
constant public interest.

When you do that, we will have Bradenton or St. Augustine quality drinking water in every home in Florida. More than that we see no need to expect.

Open house always prevails at the St. Augustine Water Works where Superintendent Clifford Earls is justifiably proud to show anyone the plant. The St. Augustine plant was a close second for the honor of being "The Outstanding Water Treatment Plant of 1948."



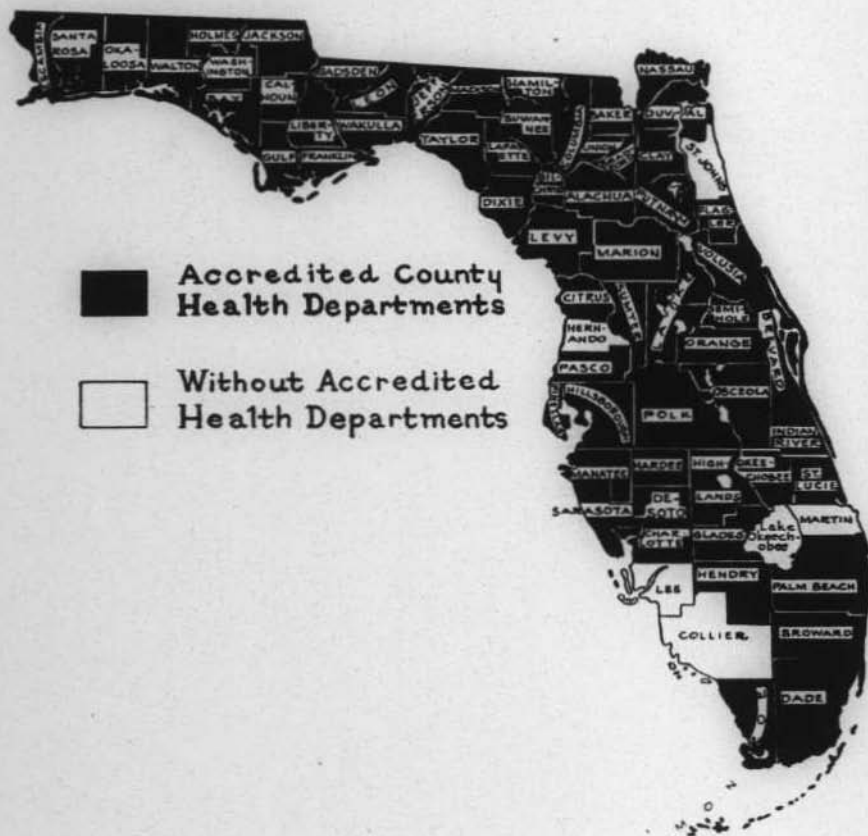
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"The Health of the people is really the foundation upon which
all their happiness and all their Powers as a STATE depend."
—Disraeli (1877)

STATE OF FLORIDA





Florida **HEALTH NOTES**

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A Glimpse into the Past

The State Board of Health

Hon. Fuller Warren
Governor of Florida

Wilson T. Sowder, M.D., M.P.H.,
State Health Officer
1217 Pearl Street or P. O. Box 210
Jacksonville 1, Florida

BOARD MEMBERS

Herbert L. Bryans, M.D., President.....Pensacola
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J. E. Edwards, D.D.S.....Miami
Mark F. Boyd, M.D.....Tallahassee

Division of Health Information
Miss Elizabeth Reed, R.N.
Acting Director

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Fred B. Ragland

Bureau of Local Health Service
George A. Dame, M.D.
Division of Dental Health

Div. of Public Health Nursing
Ruth E. Mettinger, R.N.

Bureau of Narcotics
M. H. Doss

Bureau of Sanitary Engineering
David B. Lee, M.S., Eng.
Division of Entomology
John A. Mulrennan

Bureau of Laboratories
Albert V. Hardy, M.D.,
Dr. P.H.

Nutrition Investigations and Services
Walter Wilkins, M.D., Ph.D.

Bureau of Tuberculosis Control
C. M. Sharp, M.D.

County	Town
Alachua	Gainesville
Baker	Macclenny
Bay	Panama City
Bradford	Starke
Brevard	Titusville
Broward	Ft. Lauderdale
Calhoun	Blountstown
Charlotte	Punta Gorda
Clay	Green Cove Springs
Citrus	Inverness
Columbia	Lake City
Dade	Miami
De Soto	Arcadia
Dixie	Cross City
Duval	Jacksonville
Escambia	Pensacola
Flagler	Bunnell
Franklin	Apalachicola
Gadsden	Quincy
Gilchrist	Trenton
Glades	Moore Haven
Gulf	Port St. Joe
Hamilton	Jasper
Hardee	Wauchula
Hendry	La Belle
Highlands	Sebring
Hillsborough	Tampa
Holmes	Bonifay
Indian River	Vero Beach
Jackson	Marianna
Jefferson	Monticello
Lafayette	Mayo
Lake	Tavares
Leon	Tallahassee
Levy	Bronson
Liberty	Bristol
Madison	Madison
Manatee	Bradenton
Marion	Ocala
Monroe	Key West
Nassau	Fernandina
Okaloosa	Crestview
Okeechobee	Okeechobee
Orange	Orlando
Osceola	Kissimmee
Palm Beach	West Palm Beach
Pasco	Dade City
Pinellas	Clearwater
Polk	Bartow
Putnam	Palatka
Santa Rosa	Milton
Sarasota	Sarasota
St. Lucie	Ft. Pierce
Seminole	Sanford
Sumter	Bushnell
Suwannee	Live Oak
Taylor	Levy
Union	Lake Butler
Volusia	DeLand
Wakulla	Crawfordville
Walton	DeFuniak
Washington	Chirlev

Bureau of Vital Statistics
Everett H. Williams, Jr.

Bureau of Preventable Diseases
R. F. Sondag, M.D.

Division of Cancer Control

Division of Venereal Disease Control

Epidemiology

Division of Industrial Hygiene
John M. McDonald, M.D.

Typhus Survey
E. R. Rickard, M.D., M.P.H.

Public Health Veterinarian
James E. Scatterday, D.V.M.

Bureau of Maternal and Child Health

Frances E. M. Read, M.D.


Mental Health Program

Field Technical Staff

L. L. Parks, M.D., M.P.H.

Florida **HEALTH NOTES**

Dedication

 *HE Florida State Board of Health owes its very existence to the loyal support of the people it strives to protect. Without this support, the public health program begun sixty years ago this month would not have succeeded.*

So it is with justifiable pride and appreciation that the State Board of Health dedicates this issue of HEALTH NOTES—to the people, who by their encouragement, confidence and constructive criticism—have caused Florida to gain in both health and wealth.

28 FEBRUARY



JOSEPH Y. PORTER, M.D.
1889-1917

The People Demanded—and Got A State Board of Health

NEW YEAR celebrations for the year 1889 were hardly over when a startled Legislature was asked to meet in Special Session, four months prior to the regular convening date. The newly-elected Governor, Francis P. Fleming, against decided opposition even among his closest friends, had signalled this his first official act. As a candidate campaigning for the governorship, during the previous fall, he had encountered the "shot-gun quarantine" at county lines against commerce and travel; and fresh on his mind was the constant dread and actual fright of the people at the mere mention of — yellow fever. He knew a state organization was needed to administer protective measures freed from extreme fear or unreasonable restrictions.

Back of the governor's thoughts were not only the rising sentiments of the people, crystallized by the catastrophe that befell Jacksonville the previous year, but also the prodding efforts of the Florida Medical Association —

The duty of preserving the health and lives of its citizens from the causes of disease is as incumbent on the state as is that of suppressing rapine and murder . . . one has no adequate conception of how much sickness and consequently death are preventable. The time is fast hastening when the preservation of the public health will become one of primary consideration in all enlightened governments.

Thus had spoken Dr. John P. Wall, of Tampa, 14 years before at the second annual meeting of the Florida Medical Association.

As early as 1873 an attempt had been made to organize a State Board of Health in Florida when a bill was introduced in the Legislature to provide the sum of \$200 for the purpose. This effort failed, as did many others, until 1885 when — due to the insistence of Dr. Wall on the floor at the Constitutional Convention in Tallahassee — the framers of the State

Constitution inserted the words "The Legislature shall establish a state board of health . . ." Now a part of Article 19 of the present State Constitution, these words stand as a lasting memorial to a man — "of superior mental attainments and who, far ahead of his times, was looking forward to the future welfare and commercial prosperity of his native state.—Dr. John P. Wall."

Four years later the Special Session of the Legislature called by Governor Fleming was able to pass an act creating the State Board of Health. It was signed February 20, 1889. The "three discreet citizens" appointed by the Governor to the Board chose Jacksonville as headquarters because of its "superior" transportation facilities at the time, though Tallahassee was the State Capitol and Key West the largest city.

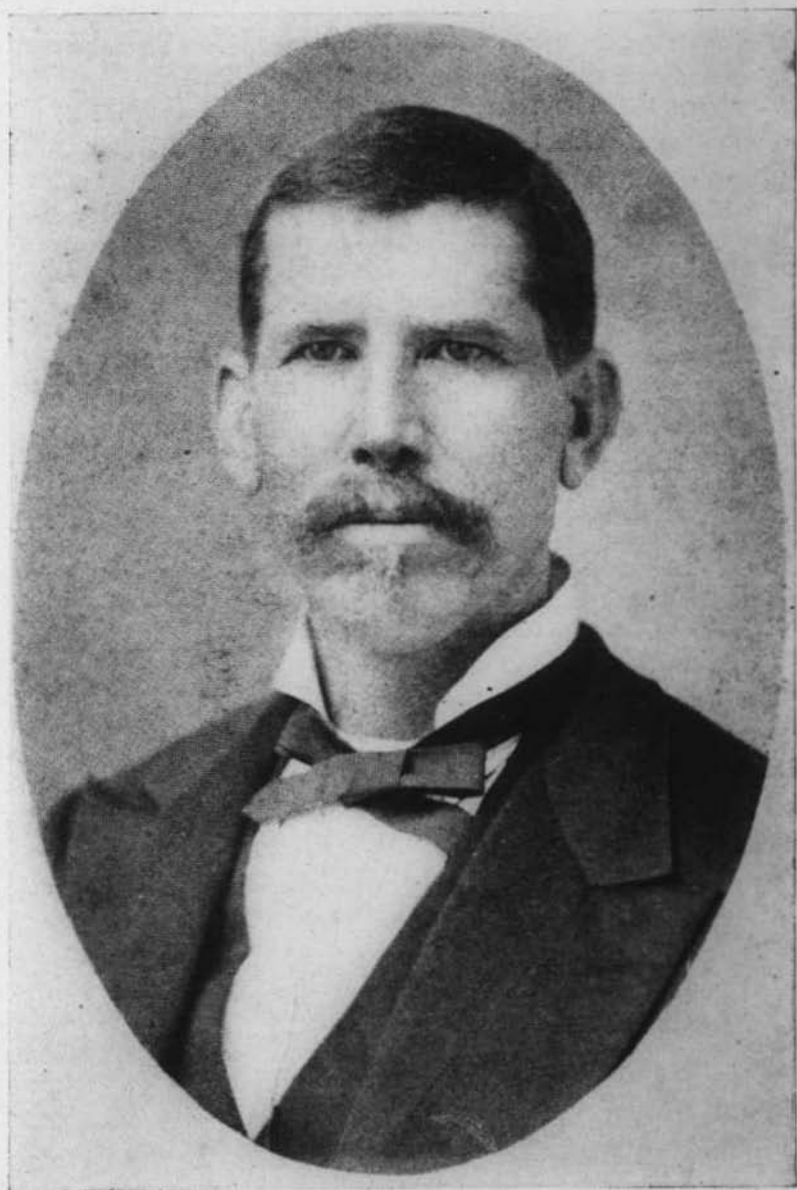
Dr. Porter Makes History

The history of the early years of the State Board of Health is inseparable from that of the first State Health Officer, Dr. Joseph Y. Porter, who served in that capacity for nearly half the life of the State Board of Health, from 1889 to 1917. Dr. Porter was the natural choice for the position by virtue of the splendid work he had done during the Jacksonville yellow fever epidemic the year before and his valuable experiences with the disease in Key West and in the Army.

When Dr. Porter set up offices in Jacksonville that first year his only assistant was a clerk; his main duty was to establish and enforce quarantine regulations for contagious diseases, particularly yellow fever.

There was little to guide him . . . except the experiences he had gained . . . It was scarcely to be expected that a perfect system could be at once inaugurated and maintained; first, because of the want of funds . . . and secondly, the lack of education of the people in regard to the importance of sanitation, which necessarily caused them to view with disfavor any encroachment on their private rights or privileges.

It is hard in the year 1949 to realize the uncertainty that prevailed in those years. During this period and before, the term "season" generally referred to the summer months when yellow fever and other diseases prevailed, as contrasted with the use of the term now in referring to our



JOHN P. WALL, M.D.

1836-1895

"Father of the Florida State Board of Health"

winter tourist season. The success of the State Board of Health in controlling yellow fever can best be described as written in the annual report ten years after the founding of the State Board of Health —

... It is within the memory of even our younger people that as each summer came there was talk of yellow fever . . . This periodic agitation of a subject which vitally interested not only the physical life of the citizen, but his business existence as well, brought about conditions which yearly disturbed home comfort and retarded the coming of people into the State, besides restricting investment of capital . . . People were scary, and naturally so in placing their money where health conditions were so uncertain . . .

The report goes on to point out the differences in conditions between the yellow fever epidemic of 1888 and an epidemic which occurred in Pensacola in 1905 when —

... Business followed its usual methods and there was no panic, no excitement, no hysteria of even those most sceptical of the ability of the State Board of Health to cope with the situation . . .

Even before the menace of yellow fever had subsided in the state, Dr. Porter had recognized and pointed out in his inimitable manner other current health problems and diseases and the need for a concentrated state action in their control. He very early recognized the need for collection of accurate figures on births and deaths. He became concerned with tuberculosis and advocated the isolation of infected persons in sanatoria. He was interested in malaria control and was one of the charter members of the National Malaria Society.

He promoted better water supplies, better sewerage systems, hookworm control, better care for crippled children. He was a vigorous exponent of compulsory vaccination against smallpox. He recognized the importance of the diseases of animals which are transmissible to man and set up in the State Board of Health a Veterinary Division which for several years performed the duties later assigned to the State Livestock Sanitary Board. He initiated the examination and registration of funeral directors and embalmers in the state before the State Board of Funeral Directors and Embalmers was established.

THE FIRST STATE HEALTH OFFICER

Dr. Joseph Yates Porter, born in Key West on October 21, 1847, was destined to play the major role in the development of Florida's public health system for nearly three decades. He received his preliminary education in New Jersey and was graduated from Jefferson Medical College with the degree of Doctor of Medicine in 1870. He served for nineteen years as Assistant Surgeon in the United States Army, where he had unusually valuable experience in the management of yellow fever epidemics.

The Watch with the Chimes

Perhaps no city in Florida owes more to Dr. Porter, than does the City of Jacksonville — he having distinguished himself in that city during the yellow fever epidemic of 1888 when hundreds of Jacksonville citizens became ill and died. The City of Jacksonville was so grateful for the volunteer services performed by Dr. Porter that at the termination of the epidemic they presented him with a beautiful and expensive watch. It was of Swiss movement with bell chimes striking the quarter and half hour. There was a heavy gold cable chain and a charm with a star in diamonds and on the other side, a ruby "P." The City of Jacksonville showed its gratitude in unmistakable terms. One of Dr. Porter's sons, Mr. W. R. Porter, living in Key West, now has the watch in his possession and he reports that the watch was of such excellent workmanship that it still keeps perfect time.

A Colorful Figure

After twenty-eight years of pioneer service with the State Board of Health, Dr. Porter retired in 1917 at the age of 70, but he continued to maintain an active interest in people and civic affairs until the time of his death in 1927. He was in every way an able and energetic State Health Officer who served the state well and he probably had as much influence upon the history of Florida as any other individual who might be named.

As soon as he could possibly do so, he established bacteriological laboratories throughout the state. He was extremely desirous of educating the lay public about the essential facts necessary in disease prevention and as early as 1892 started publishing the monthly HEALTH NOTES, which has been printed with only a few years lapsing ever since. He also saw the need for proper quarters for health department activities, and it is a noteworthy fact that most of the buildings now occupied by the State Board of Health and its branch laboratories were built during his administration.

The People's Part

Were Dr. Porter alive today he would remind us that we, as well as he, owe the advancement of public health in Florida to the good people of the state —

... Hearty is the support which the Board and its Executive Officer is daily receiving from the citizens of the State and beyond. Indeed it appears that the people of the State have caught the enthusiasm of the Board in its work, and the righteousness of its cause, and an interest in sanitation and health matters has been produced which ultimately must germinize to the credit of the public spirit of the State and to an increase of health to her citizens.

In many instances the cooperation of the people manifested itself in untold generosity. There were the Western Union officials who in the early years allowed telegrams of public health importance to be sent free of charge; the railroads who provided passes for State Board of Health employees in "their line of duty," and in addition, hauled the Exhibit Train free; the physicians who gave unselfishly of their time and energies — to mention only a few.

The people of the State apparently felt that a public health program was a worthwhile investment. The annual State appropriation has been increased from a beginning of \$50,000 a year (but only about \$25,000 per annum was made available for several years) to keep pace with the people's demand for better public health services and facilities. The volume of work has increased even more rapidly than has the availability of funds.

The Expanding Program

From what was in reality an emergency organization established to combat yellow fever, the State Board of Health has carried out the original narrow provisions of the law which founded it and through the years has expanded to include many of the functions required by changing conditions.

During the ten year period 1906-1915 the Bureau of Laboratories performed 164,837 tests and examinations, while during the period 1938-1947 a total of 11,439,161 tests and examinations were performed, a seventy-fold increase. This free laboratory service now being carried on in the main laboratory and five branch laboratories was one of the first to be added when, after the "great fire" of 1901, the State Board of Health began expanding its program.

The calamitous fire which visited Jacksonville on the 3rd of May last and which nearly obliterated the city proper from the map, destroyed also the building in which was located the office of the State Board of Health, burning up completely every record and paper belonging to the Board except the minute-book. Thus in a few moments the work of twelve years, in research, compilation and accumulation was reduced to ashes . . .

Raspberry Park

But the fire failed to daunt the spirit of Dr. Porter and the Board, who renewed all their former energies in a fresh start. They were particularly heartened and delighted when the City of Jacksonville donated (for the sum of \$100) a piece of land on Hogan's Creek and Julia Street, known as "Raspberry Park," for the purpose of building and maintaining a state bacteriological laboratory and the general offices of the State Board of Health. The building was completed in 1912 at a cost of \$40,673.82 and just four years later was reported as "fast becoming too small to accommodate the various offices . . ."

Public Health Nursing

The public health nursing program got under way in 1914 when three "Tuberculosis Instructors" were employed. (Dr. Porter preferred to call nurses in public health work "Instructors.") From this questionable origin, the public health nursing program grew through several reorganizations of its status, expanded under the federal Emergency Relief Administration, took in the Works Progress Administration program and finally

THE FLORIDA STATE BO



R. P. DANIEL, M.D.

OUR PRESIDENTS

R. P. DANIEL, M.D., Jacksonville, 1889-1890

W. B. HENDERSON, Tampa, 1891-1900

E. M. HENDRY, Tampa, 1901-1912

FRANK J. FEARNside, Palatka, 1913-1916

C. T. FRECKER, Tampa, 1917-1919

JOE L. EARMAN, West Palm Beach, 1920

CALVIN T. YOUNG, M.D., Plant City, 1921

CHARLES H. MANN, Jacksonville, 1922

H. MASON SMITH, M.D., Tampa, 1923

N. A. BALTZELL, M.D., Tampa, 1924

SHALER A. RICHARDSON, Tampa, 1925

HERBERT L. ...

OUR APPRECIATION

... This effort to perfect a system, which at first had many difficulties ... in the part of the people of the necessity of such an organization, coupled in many cases have been disheartening, and perhaps barren of subsequent good results, but for the Executive Officer in the policy ... mapped out for his guidance ... The thanks of the members of the Board ...

JOS ...

RD OF HEALTH, 1889-1949

OUR STATE HEALTH OFFICERS

JOSEPH Y. PORTER, M.D., 1889-1917

W. H. COX, M.D., 1917-1919

RALPH N. GREENE, M.D., 1919-1921

COL. RAYMOND C. TURCK, M.D., 1921-1925

B. L. ARMS, M.D., 1925-1929

HENRY HANSON, M.D., 1929-1935

W. A. MCPHAUL, M.D., 1935-1939

A. B. MCCREARY, M.D., 1939-1940

WILLIAM H. PICKETT, M.D., 1941-1942

HENRY HANSON, M.D., 1942-1945

WILSON T. SOWDER, M.D., 1945-

24
1929
1930-1932
rianna, 1933-1939
N, M.D., Jacksonville, 1940-1941
ANS, M.D., Pensacola, 1941-

reity of funds, in a proper appreciation on
stances with deliberate opposition, would
the warm support which the Board has given
s of the Executive Officer is offered to the

Y. PORTER, *State Health Officer*

1889-1917



HERBERT L. BRYANS, M.D.

established itself as a necessary public health service. Now more than 250 nurses carry on public health nursing duties through the county health departments. In addition, nursing services among Negroes have grown from the one Negro nurse employed just before World War I to include 23 of these trained Negro nurses.

Crippled Children

Early in the 1900's there was agitation for some agency to accept the responsibility of caring for indigent crippled children. Dr. Porter took up the fight and in 1911 the State Legislature authorized the State Board of Health to erect a hospital and furnish free treatment to indigent crippled children. Unfortunately no additional funds were provided but arrangements were worked out with several physicians who treated the children at a nominal cost to the State Board of Health. In 1918 it was noted that only five other states besides Florida were giving this service. For many years the annual reports of the State Board of Health contained "before and after" pictures of the children helped — mute testimony to another great service of the State Board of Health. This service was transferred to the Crippled Children's Commission in 1929, but the State Board of Health still works in close cooperation with this agency in providing saving care for these unfortunate children.

The 1916 Survey

The 1915 session of the Florida Legislature proved in many respects to be a memorable one for the public health committees of both Senate and House displayed "a splendid spirit of cooperation in the plans of the State Board of Health for needed legislation along health lines." The public health program jumped forward. It took in its stride the criticisms of the very same Legislature and requested the first survey to be made of Florida's public health program.

Dr. Carroll Fox has been industriously studying the plan of health management in Florida since December, which insures a report, when completed of not only most interesting reading but exceedingly useful advice and information and from which the State Health Officer hopes at the next annual meeting to present to the Board a scheme of reorganization of the health department of Florida, which will make the State rank foremost in the list of states in the Union, for a complete and compact system of sanitary and health administration.

School Health

That same Legislature in an attempt to assist Dr. Porter in his concern for the health of school children, required the State Board of Health to give annual medical examinations to all school children. For obvious reasons the law could never be fully carried out, although in 1916 Dr. Porter considered the possibility of employing "Women Instructors," nurses who "under stress" could each examine 80 children a day. It was not until 1939 that Florida began plans for a coordinated program of school health, sponsored by both the State Department of Education and the State Board of Health.

Sanitary Engineering

Included in the act creating the State Board of Health was a duty Dr. Porter found impossible to perform — although he tried — "to inspect all cities and towns and other points where two or more railroads meet, between the first of November and the first of May of each and every year." Dr. Porter obtained several other laws pertaining to sanitary nuisances, even a "meaningless one" on stream pollution, but not until 1916 did the program of sanitary engineering get a real start.

In rapid succession the basic sanitary engineering services were set up. Florida in 1919 became the second state in the Union to pass a bathing place act and was "recognized throughout the country as a leader in the sanitation of bathing places." Interest in the sanitation of "aviation camps" and shipyards during the first World War brought forth the job of food inspection in restaurants.

Auto camp sanitation, or tent cities, came into the limelight during the winter season of 1920-21. Sanitary conditions surrounding these camps became serious and the State Board of Health's concern grew in the 30's as it watched the advent of the "house car trailer."

The depression years brought federal relief activities, placing great emphasis on the construction of sanitary pit privies and malaria control. Then as sanitary engineering activities expanded and sanitation was improved, the people seldom gave thought to the safety of their food and drink or living conditions. Postwar planning has revived some interest in sanitary engineering activities, but a great deal more real and active interest is needed before the State Board of Health will be satisfied.

Immunizations

The years after the first World War might well be thought of as an era of change and progression. Programs were being revised considerably to meet changing needs brought about in the State through the amazing population growth, the establishment of industries, and the rather final acknowledgment of Florida as a tourist state. This meant that preventable diseases needed concerted attention in order to protect not only the resident population but the transient (industrial workers) and tourist population as well. The preventable disease program primarily concerned itself with smallpox, diphtheria, typhoid fever and malaria. To teach people the necessary facts, so that they would welcome immunization against disease was very important. As far back as 1916 Dr. Porter had started an intensive educational program, when he failed to get a compulsory vaccination law passed. One of the truly large accomplishments in this era of public health was the overcoming of lay resistance to inoculations and vaccinations.

FLORIDA HEALTH NOTES

Linked with the history of the State Board of Health is FLORIDA HEALTH NOTES, which from its first issue in July, 1892, has fulfilled the promise of Dr. Porter — to so increase in favor and circulation that this monthly bulletin becomes high on the list of services provided by the State Board of Health.

... The State Board seeks through this means to suggest instructive thoughts on health matters to the people of Florida from which earnest and intelligent reasoning cannot fail to deduce convincing facts and a cooperation on the part of the people with the work of the Board, which ultimately must result in great good to the State. (1895).

The policy of the first issues of HEALTH NOTES continues to this day and sets the pattern for disseminating information in planning community health programs. The number of people receiving HEALTH NOTES in Florida, in the United States, and in many foreign countries may seem small, but it is felt that the 9,870 people who have asked to be placed on the mailing list have a real interest in Florida's health programs. In many respects, these people play a vital part in promoting better public health.

The Exhibit Train

The stimulating means employed by health education programs today seem mild in comparison with Dr. Porter's Educational Health Exhibit Train which operated on regular schedules just before World War I, visiting almost every community, displaying its exhibits and showing motion pictures. Through action of the State Legislature and the Interstate Commerce Commission, the Train—three remodeled Pullman cars—was hauled by the railroads free of charge. It still cost \$10,045.62 — a big drain on the budget! For a brief interval then, the health information program enjoyed the distinction of being one of the first major bureaus in the State Board of Health's reorganization. It soon became linked with other programs and lost its identity until 1937, when the present health information program was begun. Since then the school health program, the Negro health program (which won a national trophy in 1944) and the food handlers school program have become important adjuncts to the basic health information services of the State Board of Health.

Malaria

Methods for controlling preventable diseases were continually changed, broadened or decreased as the budget and circumstances required. Dr. Porter early took up the debate "Does the Mosquito Cause Malaria." Interest in malaria and mosquito control was revived after the war to the extent that in 1922 this service got a real start and instigated the formation of the Florida Anti-Mosquito Association. The international recognition of one of the State Health Officers, Dr. Henry Hanson, prompted the formation of a malaria research program which today attracts visitors from many lands.

Tuberculosis

Tuberculosis has been a serious handicap in Florida even though we have long months of sunshine and balmy days. At first the blame was placed on the many "strangers" who visited the state. With the introduction of a case-finding program in 1937 and the completion of the first State Tuberculosis Sanatorium in 1938, the tuberculosis control program — although hampered by a small budget — has done a gigantic job in reducing the tuberculosis death rate more than 40 percent in ten years.

Venereal Diseases

The number of venereal disease patients discovered by U. S. Army officials in the first World War acted as a spark in many states toward the initiation of venereal disease control programs. Florida was one of the first to hold venereal disease clinics and wage a widespread educational campaign. By the end of World War II the opposition which was met in the early years had been overcome, and two important pieces of legislation were passed — the premarital law and the prenatal law (which Dr. Porter had advocated himself in 1916).

County Health Departments

After the first World War there was a beginning of interest in local health departments. A campaign for the establishment of county health departments was, however, nipped in the bud by a reduction in the appropriation for the State Board of Health, and interest in health units did not again become general until a decade later. One of the milestones in the history of public health in Florida which should never be forgotten, was the passage of an act in 1931 to authorize the establishment of county health units. All but five counties now have full-time health departments serving 97 per cent of the population. Outstanding progress has also been made in the consolidation of official health agencies locally so that at present only a few cities, and very few local school boards, attempt to carry on a health program separate from that of the county health department.

Maternal and Child Health

It took the Social Security Act to bring the lagging maternal and child health program to the foreground, even though the U. S. Public Health Service Child Hygiene Unit, which visited Florida in 1922 at the invitation of the State Board of Health and the Florida Federation of Women's Clubs, focused attention on many problems. In 1937 the State Board of Health and the Florida Medical Association surveyed the reason for Florida's high maternal and infant death rate and initiated a program which has grown in scope and personnel to provide excellent health services for all mothers and children in Florida.

Cancer Control

With a good job being accomplished in lowering the communicable disease rates, public health now is turning its attention to some of the problems of older people. In the past the diseases of old age were minimized because of the high prevalence of fatal communicable diseases. Now that our population is becoming increasingly older, the degenerative diseases — cancer, heart disease, cerebral hemorrhage, nephritis — seem to become important in the public health program. The State Board of Health took cognizance of this state of affairs — especially of cancer — and when the 1947 State Legislature passed the cancer control act, the Board aimed a program at the prevention and cure of cancer among indigent persons. An encouraging note is the fact that the majority of patients now applying for aid are those who suspect they have cancer.

DR. HENRY HANSON

Little did Dr. Porter realize that the young laboratory director he appointed in 1910 would serve Florida as State Health Officer on two different occasions. That was Dr. Henry Hanson, State Health Officer from 1929 to 1935 and again from 1942 to 1945.

Like Dr. Porter, Dr. Hanson continually urged and fought for the health services so necessary in a good public health program. He saw the establishment of many health programs which Dr. Porter started and he is particularly noted for his promotion of the laboratories and the State Board of Health Library.

Dr. Hanson became an outstanding authority on malaria and yellow fever control and won international recognition for his work in these fields, particularly in the South American countries. Since his retirement to his Jacksonville home, September 15, 1945, Dr. Hanson still maintains an interest in the public health.

“Of Many Things”

In this “Glimpse Into the Past” we cannot begin to mention every public health event.

*Since 1889 the population of Florida has increased by the hundreds of thousands — the public health problems have also increased and the duties of the State Board of Health have grown in proportion. A quick review would reveal —

The State Wide Public Health Committee started in 1939 to promote the recommendations of the American Public Health Association's survey . . . the widespread promotion of local health departments . . . the organization of interested civic groups into an active, working force toward this end.

The federal relief programs during the depression years causing the State Board of Health to adjust its regular routines to suit CWA, PWA, WPA, ERA . . . which aided the State in keeping vital services going . . . and in erecting buildings for much needed office, laboratory and library space.

The inauguration of a State Merit System in 1940 bringing much needed order to public health employment.

The State Board of Health Library — said to have been started the second day Dr. Porter took over his office — well-known for its outstanding collection of public health materials and its services to Florida physicians and public health workers.

Discovery that approximately 90 per cent of Florida's school children have dental defects . . . establishment of additional dental clinics in 1948 bringing the total to six . . . the U. S. Public Health Service dental team now in Florida demonstrating the application of sodium fluoride to children's teeth in reducing dental decay.

Hope for a better mental health program . . . five mental health clinics already in operation.

The diabetes program which through the generosity of the State Legislature has provided insulin to needy diabetic patients for 14 years.

Florida's narcotic service which grew from the day it was started to inspect drug stores — to a vital program embracing the Uniform Narcotic Drug Law, the Medical Practice Acts and the Pharmacy Laws of Florida, all aimed at preventing illegal practices affecting the public health.

The generosity of the national philanthropic organizations in aiding Florida's public health program—especially the Rockefeller Foundation and the Commonwealth Fund.

The organized program of treatment and control of infantile paralysis, as compared with methods of 1916 when health officers boarded trains at terminal points to look for poliomyelitis.

The far-reaching possibilities of our industrial hygiene program in promoting Florida's industrialization goals — through protecting the workers' health.

The long way we've come since 1918 when pellagra was not considered a public health problem — with our investigations into adequate diets and nutritional troubles.

Compared to Then

It would be of great interest to be able to compare death rates and the occurrence of various diseases in 1889 with present rates. Unfortunately, this is impossible. Dr. Porter recognized the importance of statistical information almost at once — vigorously and continuously advocating the establishment of a Bureau of Vital Statistics until this was finally brought about in 1916. There is every reason to believe that progress made prior to that time was remarkable, but there is little statistical evidence to support this belief. However, we can note the progress made since 1917.

There has been a steady decline in the crude death rate during the thirty-one year period 1917-1947. If we had the same death rate now that we had in 1917—6,063 more people would have died during 1947. The rate for 1947 is slightly higher than that for 1945 and 1946. It would not be surprising if the crude death rate rises still further in the coming years when we consider the increasing percentage of our population that is made up of older people. The remarkable decline, however, in mortality from malaria, diphtheria, tuberculosis, the enteric diseases and the drop in maternal and infant death rates is gratifying.

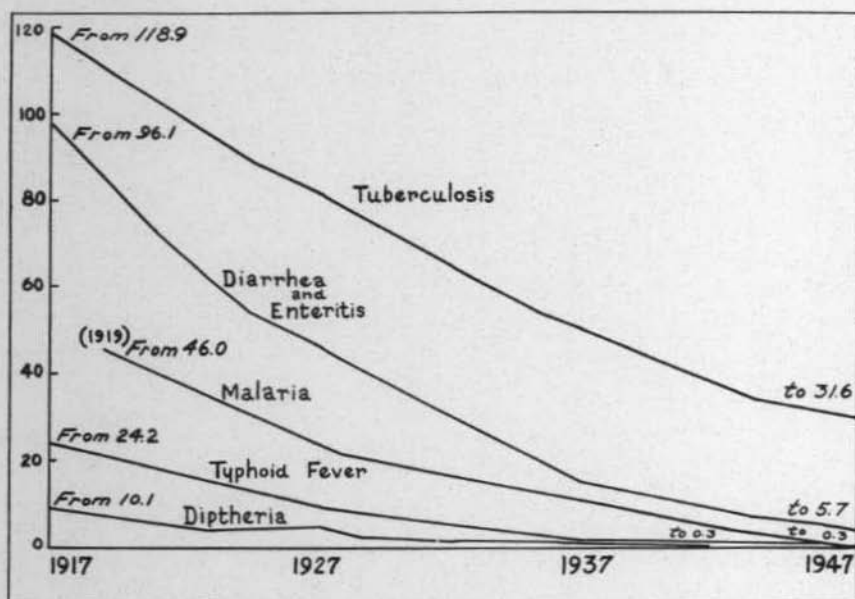
It would be presumptuous for the State Board of Health to claim sole credit for all these accomplishments. In making these public health gains it shares the honor with the people who backed its programs — the physicians, the legislators, the teachers, the press and radio, and the many organizations representing people from every walk of life. Not the least to receive credit are the loyal employees of the State Board of Health, from

the first "assistant" 60 years ago to the 1,184th employee today. Appreciation and sincere gratitude is also felt for the distinguished gentlemen who have served on the Board at various intervals.

Public health has come a long way since the day when the people expected a "good" health officer "to fall into rapture over a newly white-washed outhouse." Public health now is concerning itself more and more with the problems of older people, the effects of sodium fluoride, with hospital construction, nursing education, accident prevention, and the new antibiotics. As the public health program expands or retracts, the State Board of Health still follows the dictates of the people in providing the health services necessary to preserve Florida's most precious resource — the public's health.

... It is pleasing and gratifying to note the excellent health conditions which have prevailed both in less sickness of a preventable nature and a lowered rate of mortality, as well as to endorse a management which has produced such results at comparatively so small a cost to the people of the State of Florida . . . (1902)

Could the Board member who wrote those words — and the gentlemen who read them — but see the statistical evidences of good public health management today, they would surely stroke their beards in amazed contemplation!





FLORIDA'S STATE HEALTH OFFICER NOW

WILSON T. SOWDER

Wilson T. Sowder was born at Callaway, Va., February 27, 1910. He was graduated with the degree of M.D. from the University of Virginia in 1932 and received the master of public health degree at Johns Hopkins Univehsity in 1934.

Upon being commissioned assistant surgeon, U. S. Public Health Service, in December 1934, Dr. Sowder started a career which took him as far north as Alaska, then to Florida where he served the state in many capacities. He served as director of VD control activities in Tennessee and in Florida, has worked in U. S. Marine Hospitals and Quarantine Stations, and has been a consultant in general public health and VD control activities for the War Shipping Administration and for District 9 of the U. S. Public Health Service.

Dr. Sowder left Florida in 1943 when he was serving as Assistant State Health Officer, but was called back to become State Health Officer on September 15, 1945.

Since then Dr. Sowder has advanced to the rank of Senior Surgeon with the U. S. Public Health Service which has granted him a leave of absence to serve Florida as State Health Officer.

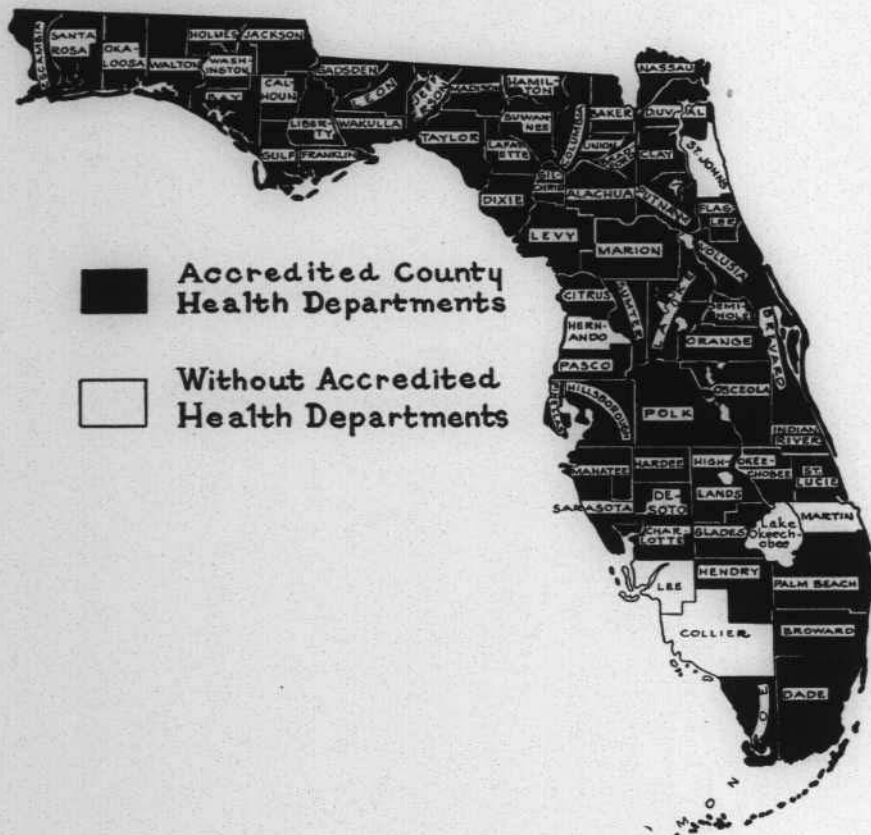
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"The Health of the people is really the foundation upon which
all their happiness and all their Powers as a STATE depend."

—Disraeli (1877)

STATE OF FLORIDA





Florida **HEALTH NOTES**

Published by the Florida State Board of Health since 1892
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QUO VADIS

The State Board of Health

Hon. Fuller Warren
Governor of Florida

Wilson T. Sowder, M.D., M.P.H.
State Health Officer
1217 Pearl Street or P. O. Box 210
Jacksonville 1, Florida

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Florida **HEALTH NOTES**



This issue of **FLORIDA HEALTH NOTES** is dedicated to the Honorable Fuller Warren, Governor of Florida, who is concerned with the health, well-being, prosperity and happiness of the people of Florida

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The State Health Officer

FIRST OF ALL —

- ★ that the present public health program be maintained at all costs.

★ NEW LEGISLATION

1. To provide for compulsory vaccination of dogs against rabies.
2. To enable suburban areas to form Sanitary Districts for purpose of providing residents with water and sewerage systems.
3. To make birth and death certificates confidential.
4. To enlarge the diabetes control program.

★ ADDITIONAL SUPPORT

1. To expand the public health dental program and health services to children in general, including child guidance.
2. To lower infant mortality rates.
3. To have more mobile food handler's schools.
4. To prevent the pollution of the state's water.
5. To complete the organization of county health departments in the state.

These Recommendations are being presented to the Legislature

Recommends

- ★ that the high quality of personnel now engaged in public health work in Florida be maintained through every effort.

IMMEDIATE NEED BECAUSE

- ★ Rabies in animals has increased more than 50 per cent since 1946.
- ★ There is a steady increase in population living outside of cities where public sanitary utilities are not available.
- ★ Facts such as illegitimacy, adoption, etc., are available to the general public under the present vital statistics law.
- ★ Diabetes ranks eighth as a cause of death in Florida and the incidence of the disease is increasing.

- ★ Many school children in Florida have physical defects which need attention. Approximately 90 per cent of these have dental defects. Child guidance aids in preventing mental disease later in life.
- ★ The infant death rate is too high.
- ★ Not enough food handlers know how to handle food safely.
- ★ The growing population of Florida and its cities is creating increasing problems of water pollution.
- ★ There are still five counties in the state which do not have health departments — St. Johns, Hernando, Martin, Lee and Collier Counties.

It is hoped that these recommendations will be well received

BETTERING FLORIDA'S HEALTH

Wilson T. Sowder, M.D.
State Health Officer of Florida

In this report to the people, Dr. Sowder points out some of the problems which faced him when he took over his office September, 1945, and the accomplishments made under his present term which will expire in September of this year.

Streamlining certain business methods of the State Board of Health was the first step taken back in 1945 toward betterment of Florida's health. A central purchasing unit was set up;

new methods of accounting were instituted; a personnel office was established; and technical programs were reorganized.

Florida gained pre-eminence among other states by recruiting well-trained professional personnel. To train them in modern public health methods, a training center was set up in Alachua County. Another endeavor with the same goal was the organization of a field technical staff to assist county health unit personnel.

More County Health Departments

Florida has special reason to be proud of the efficient operation of its county health units, for the unified administration under which they operate is much better than in many parts of the country. Municipalities, school boards, voluntary health organizations cooperate with the County Commissioners and the State Board of Health and pool their funds and efforts in a single county health unit. Florida also leads the nation in the percentage of its people served by local health units staffed by competent personnel. This has been accomplished since 1945 when there were only 35 health units. At present only five counties do not have organized health departments. These five have less than 3 percent of the state's population. This progress was made possible through increased state appropriations by the 1945 and 1947 Legislatures.

New Legislation

The Legislature in 1945 aided the public health program by passing an act which requires a blood test for syphilis before marriage and before the birth of each child. In 1947 the Legisla-

ture enacted: a hospital licensing law for regulating and licensing hospitals receiving federal aid in their construction; and a law providing for regulating and licensing pest control operators.

Cancer Control

Another important legislative act was the passage of the cancer control bill in 1947 which appropriated \$200,000 to combat cancer. This appropriation, thus far, has enabled approximately 1,500 sufferers from cancer, or those suspected of having it, to receive good medical care and hospitalization.

Expanded Programs

Increased appropriations by the State and Federal governments during these years also made it possible for the State Board of Health to initiate new health programs —

- ★ industrial hygiene to aid the Industrial Commission and private industry in preventing needless disability and death.
- ★ a veterinary public health program to aid in controlling diseases transmitted from animal to man, particularly animal rabies which is increasing in incidence.
- ★ an expanded rodent control program which reduced typhus fever cases from 484 in 1944 to 166 in 1948.
- ★ a mental hygiene program which saw the establishment of several child guidance clinics. Consultation services concerning exceptional children were furnished to the State Department of Education.
- ★ a diabetes demonstration unit in Jacksonville, one of two in the country operated by the U. S. Public Health Service.
- ★ a food handlers school program operated in cooperation with the Hotel Commission and Florida Restaurant Association—aiding the promotion of better food sanitation.

The health program for school children was expanded and emphasis placed not only on the medical examination of school children, but also on the correction of defects and in improving school sanitation.

The tuberculosis program made good progress toward its goal of x-raying as many adult citizens as possible — with nearly 400,000 x-rayed persons in 1948 as compared with 38,979 in 1945.

Outstanding progress was made in stimulating construction of better water supply and sewerage disposal systems. The public was awakened to the problem of surface and underground water pollution by human and industrial wastes — but improvement of this condition will require constant study, an awareness on the part of the people, and the expenditure of considerable funds by taxpayers and private industry.

Gonorrhea has practically been routed as a public health problem, through better and less expensive and less time consuming methods of treatment. This does not mean that the incidence of gonorrhea is no longer high; but that new treatment methods cause less illness and loss of time from work. Marked progress has been made toward controlling syphilis with 26,390 persons receiving treatment for the disease at the State Board of Health's Rapid Treatment Centers. Since 1944 the death rate from syphilis has decreased from 16.4 to 10.3 deaths per 100,000 population in 1947.

Laboratory examinations made for communicable diseases have almost doubled for the four year period — jumping from 1,200,000 in 1944 to an estimated 2,000,000 in 1948.

The Score

While tangible results are not usually to be expected immediately upon improving public health programs, there are already indications that illness and death are being reduced in Florida. The 1948 death rates are not yet available, but a comparison of the rates per 100,000 population for 1944 with those of 1947 reveals —

	1944	1947
Diarrhea & Enteritis	10.7	5.7
Diphtheria	1.9	0.7
Infant mortality	42.9*	37.0*
Malaria	1.5	0.3
Maternal deaths	3.2*	2.1*
Pellagra	1.6	0.5
Premature birth	14.6*	13.9*
Syphilis	16.4	10.3
Tuberculosis	36.0	31.6
Typhoid fever	0.7	0.3
Typhus fever	1.5	0.3
Whooping cough	2.2	1.3

*Rates per 1,000 births

WISE LEGISLATION SAVES LIVES

Florida Needs

AN ENABLING ACT FOR SANITARY DISTRICTS

When Sanitary Districts are authorized by law, a group of people, or one or more city or county governments can vote or create a political subdivision which will provide a water supply, sewage or refuse disposal systems.

AN ENABLING ACT PASSED BY THE LEGISLATURE WILL AUTHORIZE

- ★ creation of sanitary districts.
- ★ incorporation of such district.
- ★ construction, maintenance and operation of water supply, sewage, and refuse disposal systems by such districts.
- ★ various methods of financing such construction, maintenance, operation and control by the Sanitary Districts.

There is an urgent need for this type of legislation in Florida, since 30 to 40 per cent of our urban population live just outside the corporate areas where there are no political subdivisions under which sanitary utilities can be made available.

With an ever-expanding building program going on, there are literally scores of subdivisions, housing developments and large concentrations of people in these areas where no public water supply exists. In many areas the topography of the ground and soil formation are such that septic tanks cannot work satisfactorily due to the high water tables—frequently creating a public hazard.

**THE PROPOSED SANITARY DISTRICT BILL IS
STRICTLY AN ENABLING ACT—TO PERMIT
FORMATION OF UTILITY SYSTEMS UPON THE
APPROVAL OF FREEHOLDERS WITHIN ANY
AREA DESIRING A SANITARY DISTRICT.**

Florida Needs

A RABIES CONTROL LAW

RABIES IS INCREASING. This dread disease has increased in Florida more than 50 per cent since 1946. There were 213 cases of animal rabies reported in 1946 as compared to 332 animal cases and one human case reported last year.

RABIES IS A PUBLIC HEALTH PROBLEM. A horrible death is almost a certainty for those persons who are bitten by rabid animals and do not take treatment in time. Treatments for people who have been bitten by dogs are costly, painful and not without danger. If rabies did not exist, these treatments would not be necessary.

RABIES IS AN ECONOMIC PROBLEM. Leon County alone reports \$15,000 in livestock loss from rabies. Rabies in dairy cattle has been reported in Calhoun, Jackson, Madison, Hillsborough and Volusia Counties.

Current wide distribution of rabies is due to the general popularity of dogs as pets. Domestic dogs revert easily to a semi-wild or scavenger existence and stray dogs increase rapidly in number unless an organized effort is made to collect such animals.

RABIES IS A DISEASE WHICH CAN BE ERADICATED.

Sufficient is known about rabies to control and eventually eradicate it. England, Australia, New Zealand, Hawaii and the Scandinavian countries have controlled the disease.

VACCINATION OF OWNED PETS AND HUNTING DOGS ANNUALLY, THE APPREHENSION AND CONTROL OF STRAY DOGS AND ANIMALS WILL AND CAN ELIMINATE RABIES FROM FLORIDA.

TO ERADICATE RABIES

A RABIES CONTROL ACT SHOULD BE PASSED BY THE STATE LEGISLATURE. If passed, this Act (prepared and endorsed by the Florida Veterinary Medical Association) will require —

- the vaccination of dogs against rabies.
- the issuance of a certificate of vaccination.
- the wearing of a tag by all vaccinated dogs.

The Act further calls for —

- the impounding of all unvaccinated dogs.
- the disposition of all unvaccinated dogs.
- the confinement of dogs which have bitten human beings and which have been exposed to rabid animals.
- a penalty for violation of the law.



Florida Needs

CHANGES IN THE VITAL STATISTICS LAW

THE LEGISLATURE IS ASKED

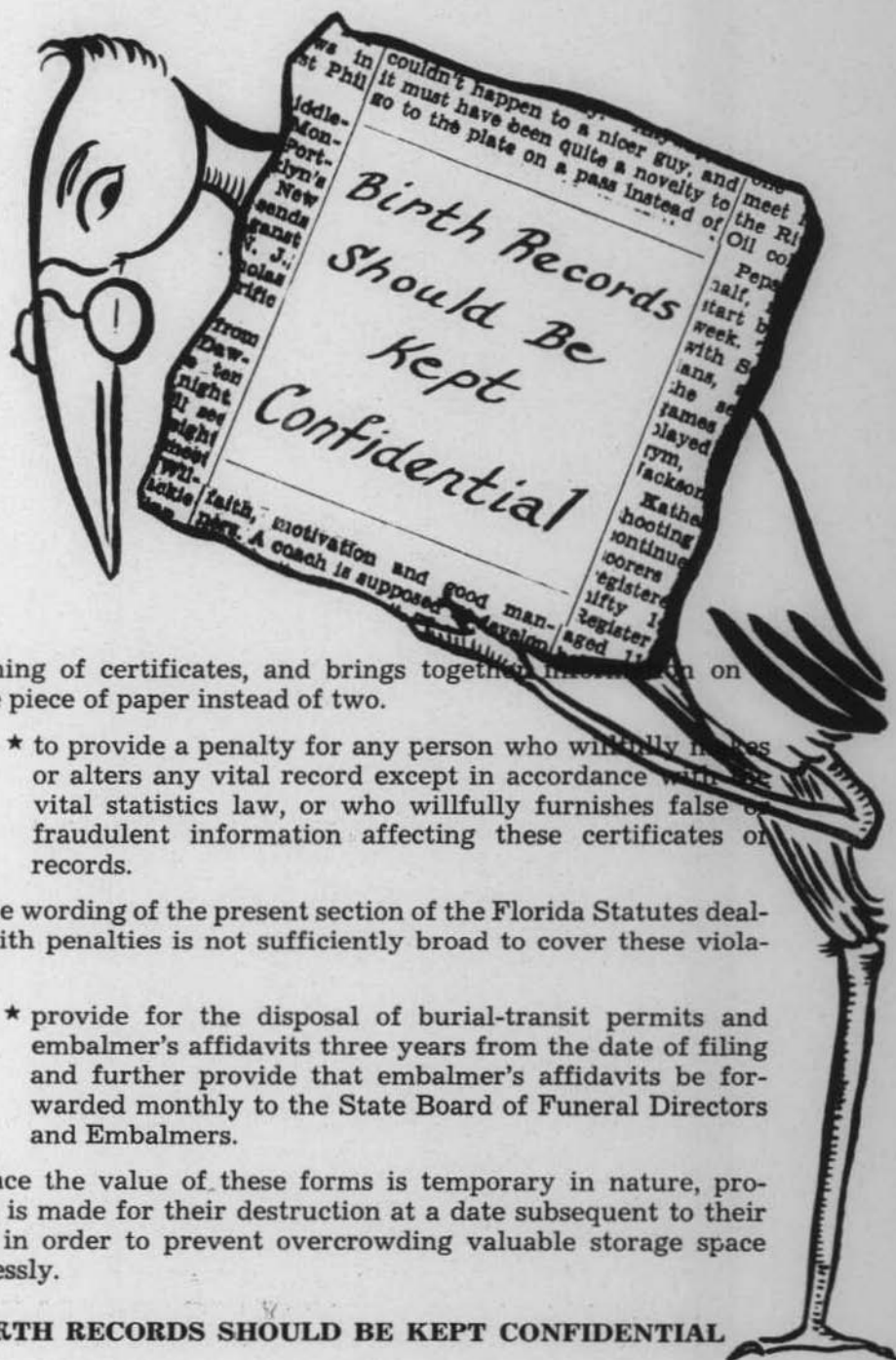
to provide that the State Registrar shall issue certified copies of all or any part of any vital record only to persons who have a legitimate interest in such records.

Main purpose of this change is the protection of the individual from unnecessary disclosures of such facts as illegitimacy, unknown parentage, adoption, and other data which may cause embarrassment. This can be done by issuing certified copies of birth certificates only to persons who have a proper interest in them and by issuing a birth registration card for most certification purposes.

This birth registration card is a wallet-sized card, sealed in a tamper-proof cover which bears only the persons name, sex, date and place of birth, date of filing and birth certificate number. It would be adequate in the vast majority of cases in which a copy of the birth certificate is now required.

- ★ to provide for the use of a "stillbirth" certificate for the registration of a stillborn child. At the present time a stillborn child must be registered both as a birth and a death.

Use of this certificate would permit the collection of additional information concerning the cause of "stillbirths." Since there were 1,693 stillbirths in Florida during 1947, it is felt that there are enough stillbirths to justify special study. Also, use of a single certificate requires less filing space, less handling, less



matching of certificates, and brings together information on a single piece of paper instead of two.

- * to provide a penalty for any person who willfully makes or alters any vital record except in accordance with the vital statistics law, or who willfully furnishes false or fraudulent information affecting these certificates on records.

The wording of the present section of the Florida Statutes dealing with penalties is not sufficiently broad to cover these violations.

- * provide for the disposal of burial-transit permits and embalmer's affidavits three years from the date of filing and further provide that embalmer's affidavits be forwarded monthly to the State Board of Funeral Directors and Embalmers.

Since the value of these forms is temporary in nature, provision is made for their destruction at a date subsequent to their filing in order to prevent overcrowding valuable storage space needlessly.

BIRTH RECORDS SHOULD BE KEPT CONFIDENTIAL

Florida Needs

MORE DIABETES CONTROL

AN AMENDMENT TO THE PRESENT DIABETES LAW

— will enable the State Board of Health to conduct a statewide diabetes control program of research and education relating to the causes, prevalence and prevention of diabetes.

A DIABETES CONTROL PROGRAM IS NEEDED BECAUSE —

- ★ Diabetes ranks eighth as a cause of death in Florida. Indications are that the death rate will continue to climb.
- ★ Education of the public is one of the best known means of controlling the disease. Education brings about early discovery.
- ★ Education of the already known diabetic will help him to carry out his own day-to-day treatment under the supervision of his physician.
- ★ The educated diabetic can be an asset to his community.

AN INCREASE IN THE INSULIN APPROPRIATION IS NEEDED BECAUSE —

The number of persons with diabetes is increasing.

Demands for insulin distributed by the State Board of Health to indigents has so increased that the cost exceeded the appropriation for the biennium, 1947-48. The cost of insulin has also increased.

SO THAT —

The State Board of Health may conduct a diabetes program of research and education, and

No citizen of Florida will die of diabetes because he cannot afford to buy enough insulin —

THE LEGISLATURE IS ASKED TO APPROPRIATE \$60,000 ANNUALLY TO CARRY OUT THE PROVISIONS OF THE DIABETES CONTROL ACT.

The State Board of Health Needs—

ONLY \$680,260* PER YEAR MORE

To carry on its present health services to the people and to provide the expanded services discussed in this issue of HEALTH NOTES, the State Board of Health is asking the Legislature to appropriate for the 1949-1951 biennium \$4,778,420 — compared to \$3,417,900 actually appropriated for the 1947-1949 biennium. The request is an increase of \$1,360,520 for the two-year period or \$680,260 annually. This increase would provide for the following services:

An expanded school health program providing for employment of physicians, dentists, nurses, and dental technicians to discover defects and to help bring about corrections.....	\$ 266,000*
An expanded stream pollution control program.....	100,000
An expanded cancer control program.....	100,000
Increase for local health units.....	100,000
An expanded food handlers' training program.....	10,000
Salary and travel for a Narcotics Officer trainee.....	4,800
Increased per diem allowance for employees in a travel status up to \$7.50 per day.....	20,000
Salary increases (State level) (in proportion that State funds for salaries bear to total funds for salaries)	43,920
Increase appropriation for purchase and distribution of insulin from \$20,000 to \$35,000 annually....	15,000
Increase appropriation for Merit System operation from \$13,000 to \$14,600 annually.....	1,600
Absorb portions of Field Training Center and Field Technical Staff operation previously financed by Commonwealth Foundation funds	26,040
Reduce hospital licensing appropriation from \$20,000 annually to \$12,900 annually	(-) 7,100

Total Annual Increase of State Appropriation Requested \$680,260*

*Since these figures were prepared this request has been reduced by \$125,000—due to the difficulty of recruiting dentists. There still remains \$25,000 to obtain a dental health director and to allow moderate expansion of the dental health program.

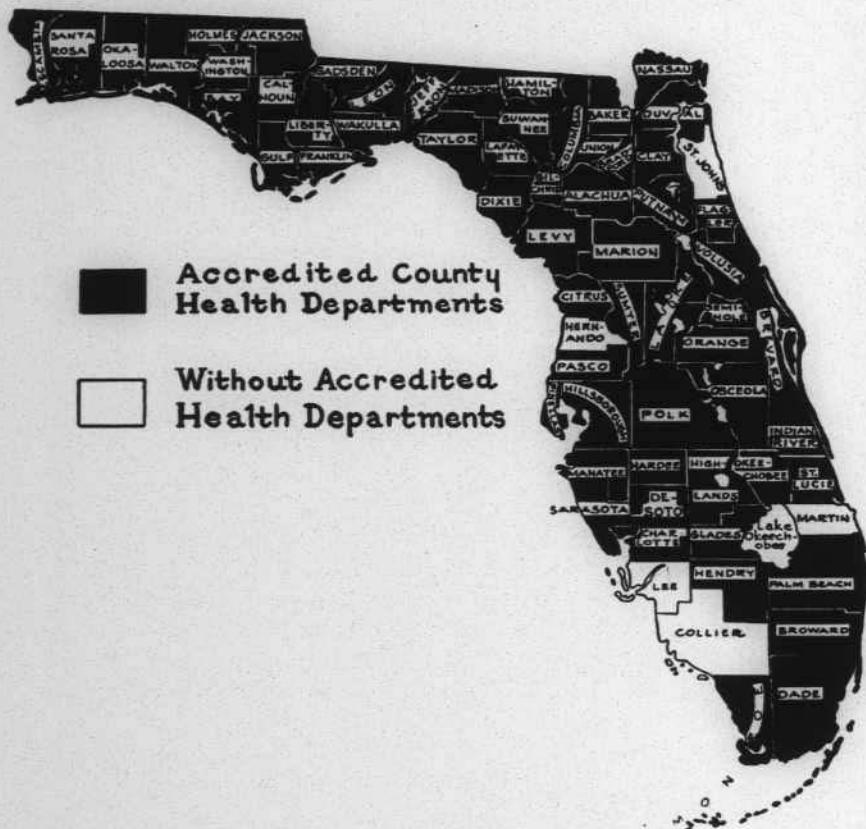
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DELAY MEANS DECAY

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Governor of Florida

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State Health Officer

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Florida **HEALTH NOTES**

AWARENESS

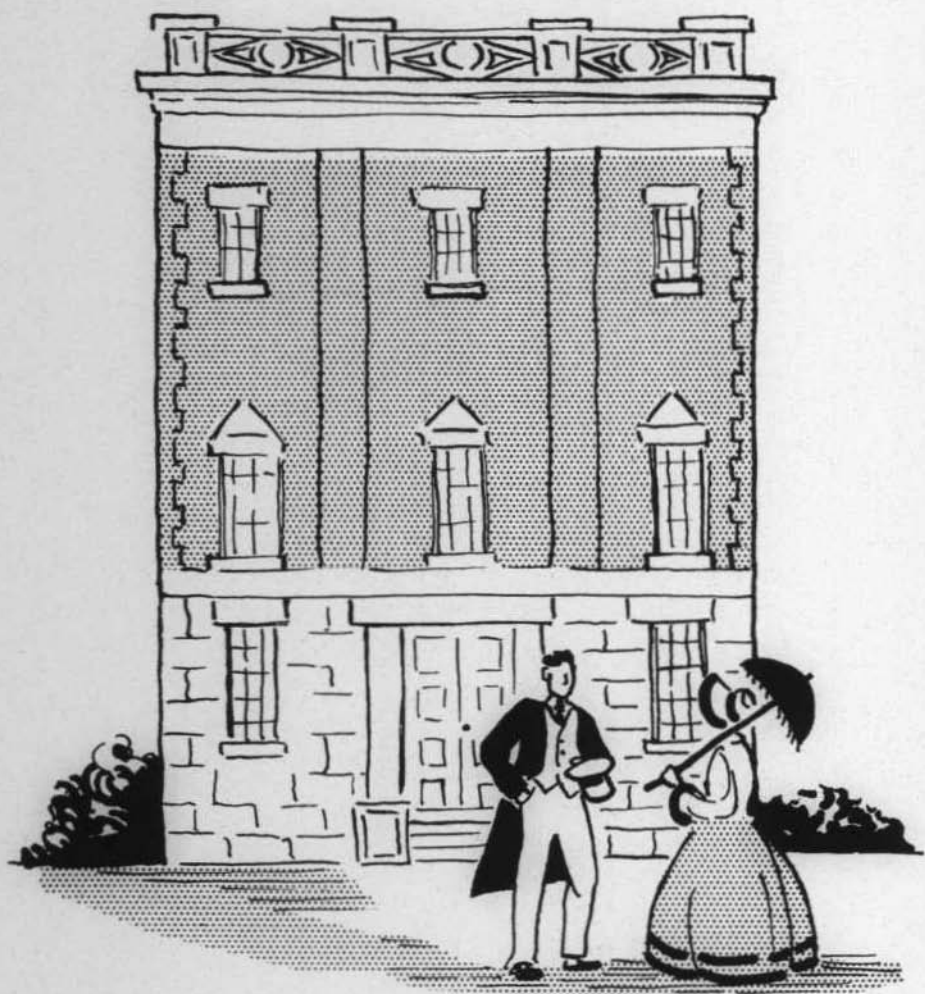
Dentistry, hand in hand with the other medical sciences, has made phenomenal progress in the past twenty years. The individual taking advantage of these advances has a great opportunity to build toward complete general health—for himself, for his family, and for others.

It is within the past ten years that the dental profession realized the importance of educating the individual to that end. The need for authentic and basic facts concerning the mouth and its care was felt and a dental health education program was started. The American Dental Association has done a splendid job in this respect. Tribute is also due the U. S. Public Health Service and the small Association of Public Health Dentists and associates.

Today the individual is much more aware of the need for routine examinations with good diagnosis based on x-rays, visual aids and study casts, from which a plan of dental treatment can be instigated. This gives the individual, as a dental patient, complete assurance that all dental conditions needing treatment are to be cared for—and that he in turn will receive instructions for an adequate home care program of his teeth and surrounding structures.

To encourage a better dental health program for all, some of the individual's problems—and Florida's—are presented in this issue.

J. Ernest Edwards, D.D.S., Member
Florida State Board of Health
Miami, Florida.



The first School of Dentistry
in the world. The Baltimore
College of Dental Surgery.
Established in 1840.

Responsibility + Action = Dental Health

Wearing false teeth in their pockets six days a week and in their mouths on Sunday was a common practice of people not too many years ago. Today most people wear attractive artificial dentures with comfort, but the increasing number of people wearing false teeth is cause for alarm.

Greatest concern, however, is directed at the 33,000,000 newly decayed teeth estimated to be developing every year among U. S. children, 2 to 18 years of age. Dental caries is the biggest cause of the loss of teeth during the early part of life—developing faster than they are corrected.

As high as 50 percent of 2 year old children have one or more decayed teeth. Decay is present in about 80 percent of 3 year olds, about 90 percent of 4 year olds, and in about 96 percent of 5 year olds.

Through lack of dental health care early in life, a backlog of unmet needs accumulates as these children become adults. Diseases of the gums and supporting structures of the teeth are often responsible for the loss of teeth in later years. Facial deformities resulting from abnormal arrangement of the teeth, diseased gums, accidents to teeth and abnormalities, such as cleft lip and palate and impacted teeth, also are evident in a large number of children and adults. By the time the average American is 30, he has only twelve healthy unfilled teeth when he ought to have at least twenty-eight.

The most logical and effective means of ultimately bringing better dental health to the people is adequate dental service for children. Dental care begun at the preschool age and continuing regularly through school years, adolescence and adulthood brings marked improvement in dental and general health.

In last year's Child Health Day proclamation President Truman urged that "as a first step practical plans be developed to obtain thorough medical and dental examination, and treatment if necessary, for every child entering school for the first time . . . to the end that all correctable defects found in the health of these children shall have been removed and placed under treatment by the close of the school year."

Recently-developed dental techniques have increased the scope of dentistry and have made mass methods immediately possible. But successes recorded in the field of preventive dentistry are in vain unless the responsibility for dental health is accepted by the individual, family, and community. Wanted is the broadest possible application of recognized preventive and control measures early in life—so that later needs for dental services are reduced to a minimum.

WHAT IS FLORIDA DOING?

Well aware of the necessity for dental health services in an overall program of public health, the State Board of Health has from its beginning stressed the need for adequate dental health services. When the Dental Health Division was finally established in 1936 a three-fold program was set up: to render corrective dental care to indigent prenatal and postnatal mothers, preschool and school children; to promote dental health services in the counties; and to encourage the formation of good dental health habits. Right from the start, however, the dental health program was severely handicapped by lack of funds and personnel, and since June, 1946, the Division has been without a director almost continuously.

Even with the curtailment of the dental health program much worthwhile dental service is being rendered by the Division's only dentist in the State dentomobile. Going into rural areas where there are no dentists in private practice, the dentomobile has provided dental care to many indigent children and mothers.

For persons in areas where there are dentists, but who cannot pay for private care, demonstration and state aid programs are initiated, and local dentists give such service on a fee basis. There are, however, only four such part-time dentists rendering service in state and county sponsored programs.

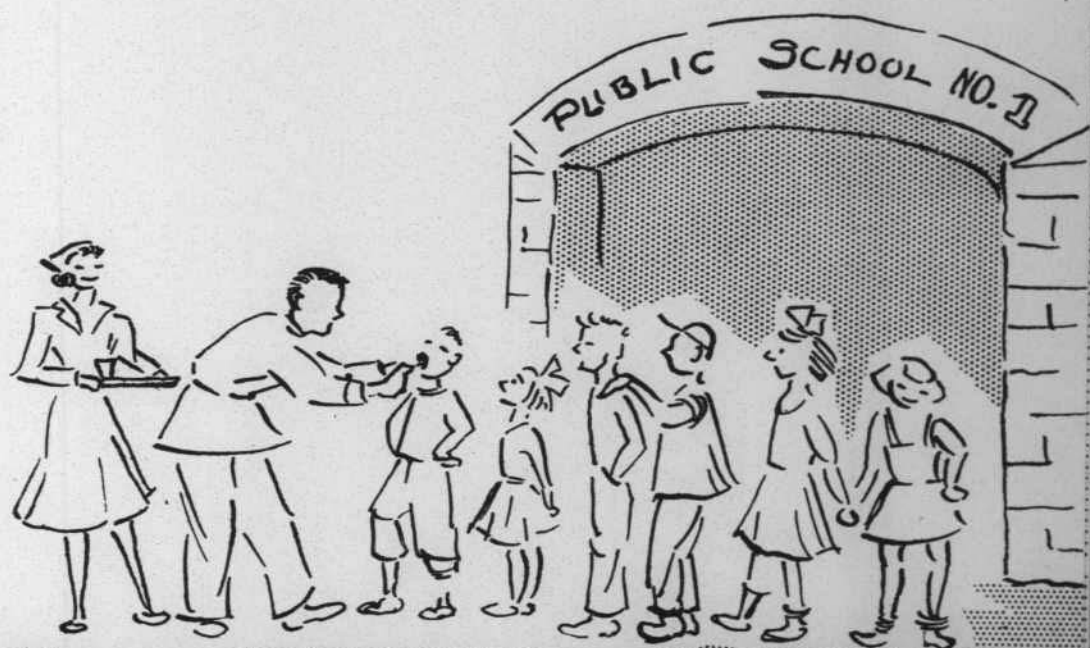
The counties of Alachua, Duval, Dade, Orange, Pinellas and Hillsborough have organized dental health programs. Dento-

mobiles staffed by full-time dental personnel or dental clinics in the health departments provide indigent mothers and children in these counties with good dental health care. Children of school ages also receive dental check-ups wherever possible.

In an overall effort throughout the state, dental health information is being provided through the media of demonstration clinics, distribution of literature, dental health lectures or talks, and moving pictures.

Both at the state level and in the county health departments it has been impossible to secure an adequate staff of public health dentists to carry on the amount of work demanded of them. There simply have not been a sufficient number of licensed and qualified dentists interested in public health to supply the needs of the state. This situation probably may be relieved by offering salaries sufficiently high to induce a greater number to adopt public health dentistry as a career.

Early this year the sum of \$266,000 was proposed for the fiscal year 1949-1950 to expand the school health program and to provide for the employment of physicians, dentists, nurses, and dental technicians to discover defects and to help bring about corrections. Before being presented to the 1949 Legislature this sum was reduced by \$125,000 due to the difficulty of recruiting dental personnel. There still remains in the proposed budget an increase of \$25,000 to obtain a dental health director and to allow moderate expansion of the dental health program.



SODIUM FLUORIDE IN PREVENTING DENTAL DECAY

As hope for expansion of its dental health program waxed and waned in 1948, the advent of a sodium fluoride demonstration team from the U. S. Public Health Service was welcomed by the State Board of Health.

This team demonstrates the correct techniques for sodium fluoride applications to dentists and dental hygienists employed by state and local health departments and encourages the establishment of local facilities for expanding and continuing this program. Private dentists are welcome to attend the demonstrations.

The sodium fluoride team first "set up shop" in Alachua County, from there it went to Duval County and presently is engaged in demonstrating sodium fluoride applications to Gadsden County.

Studies by research workers have demonstrated that the application of a solution of sodium fluoride to the teeth of children will afford as much as a 40 percent protection against new dental caries. Children receiving this service will not be entirely free from new caries and every child may not have 40 percent less caries. The implications of the benefits from this treatment were so important that the 80th Congress appropriated \$1,000,000 for the use of the U. S. Public Health Service in encouraging further action in this field.

Procedure for using sodium fluoride on a mass scale is very simple. In each county visited by the team, portable equipment is set up in a selected school where the children come in groups for their applications. The teeth are first examined by the dentist in charge, then are cleaned by one of the two dental hygienists with the staff. Following that, the dentist applies the sodium fluoride using either a spray, brush, or cotton pellets for the application.

To be most effective, the dentist or dental hygienist must give



$4 \times 4 = \text{healthy teeth}$



**4 applications of
sodium fluoride
solution given four
times during child-
hood curb tooth
decay as much as 40%**

each child a series of four sodium fluoride applications at intervals of two to seven days. One series of four applications should prove effective for a period of three years. All children between the ages of 3 and 16 should receive this first series of applications. Identical series of applications should be repeated at the ages 7, 10, and 13. It is important to start at age 3 because by that age all of the baby teeth should be in the mouth. At ages 7, 10 and 13 the new permanent teeth probably have developed.

It is stressed that the U. S. Public Health Service's sodium fluoride team, who by invitation of the State Board of Health and the Florida State Dental Society is visiting Florida communities and other U. S. communities as well, is for demonstration purposes only. Practically all dentists can give sodium fluoride treatments, so alert parents everywhere desiring this protection for their children should take them to their private dentist.

THE STATE BOARD OF HEALTH'S POLICY REGARDING FLUORINATING PUBLIC WATER SUPPLIES

Recognizing that the introduction of sodium fluoride into the drinking water without sufficient and recognized standards of control would be dangerous to the public's health, the State Board of Health recently adopted the following policy —

"Prior to placing treatment in effect which involves applying sodium fluoride or similar compounds to a public water supply these steps are necessary:

1. A written request from the appropriate city official to the State Board of Health for permission to apply fluorides to the local water supply under supervision of the state agency.
2. Approval in writing for fluoridation from—
 - (a) the local medical society
 - (b) the local dental society
 - (c) the local city board of health
 - (d) the local county health department
3. Passage of an ordinance by the city governing body directing the water department to provide the means and to proceed with the introduction of fluorides to the water supply as directed by the State Board of Health.
4. Approval in writing for fluoridation by the State Board of Health with the following provisos:
 - (a) The municipality must provide a qualified technician approved by the State Board of Health to personally supervise this treatment process. This technician, under the direction of the Bureau of Sanitary Engineering, State Board of Health, will be responsible for all phases of this treatment process, including application rates, daily chemical control tests on raw and treated water, adjustment of feeders, and furnishing required reports to city and state agencies.
 - (b) The fluoride content is not to exceed 1.5 parts per million with the desired content being within the range of 1.0 to 1.3 parts per million in plant effluent and distribution system samples.
 - (c) Use of an approved gravimetric loss-in-weight type feeder (preferably in duplicate) with appropriate capacity, and equipped with recording charts and automatic alarm bell and warning lights for giving visible and audible indication of errors in rates of feed.
 - (d) Complete records as requested must be submitted to State Board of Health.
 - (e) Water samples for chemical analysis must be submitted as directed to the State Board of Health for control tests."

DENTAL DISEASES

DENTAL CARIES

Tooth decay or dental caries is a destructive disease of the teeth; it is the process by which the hard structures of the tooth are broken down and the organic portions are disintegrated. The most widely accepted theory says that dental caries is accelerated by the formation of acids on a tooth surface resulting from the action of micro-organisms on foods.

Treatment. The most effective and economical way of treating caries is to have cavities filled by a dentist during the early stages of decay. Finding caries early is made possible through frequent dental check-ups, and having a small cavity filled is not only effective in saving the tooth but also in saving money on dental bills.

When decay is not removed from the tooth, it spreads more or less rapidly within the dentin until it reaches and infects the nerve. Since the blood circulates to the nerve and around the tooth, an infected nerve is a health hazard. A tooth in an advanced stage of decay must usually be extracted in the interest of good general health.

X-ray. The x-ray not only aids the dentist in finding hidden cavities in teeth but also is useful in finding other conditions that require dental attention, such as abscesses, impacted teeth, and bone destruction.

Prevention of Dental Caries. No absolute preventive is known, but much hope is being placed in the direct application of sodium fluoride which has been known to reduce dental decay as much as 40 percent. Also, dental authorities have concluded that a person can reduce the amount and extent of dental caries by restricting sweets in the diet, by obtaining timely dental care and by keeping the teeth clean.

Care of the teeth should begin early in life, preferably at the age of two years, and examinations should be repeated regularly and frequently thereafter—at least twice yearly for adults and oftener for children.

Fluorinating Water Supplies in Preventing Tooth Decay. Investigations are being made to observe the effects of adding minute amounts of fluorine salts to public water supplies. More study will be necessary before conclusive evidence on the effectiveness of this procedure can be obtained, but reports to date are



YOU AND YOUR DENTIST CAN PREVENT
YOUR FUTURE DENTAL HEALTH DEPENDS ON
YOUR DENTIST

you . . .

- should eat healthful foods.

Learn what the seven basic foods are and include them in your meals.

Restrict the use of sweets and sweetened drinks because they are responsible for tooth decay.

- should visit the dentist regularly.

Time, money, and teeth will be saved.
Dental treatment will be easier.

- should brush your teeth soon after eating.

Brush down on upper teeth.

Brush up on lower teeth.

Work bristles over gums and then between teeth.

Clean biting surfaces with a sweeping motion.

Discard brushes when bristles are soft.



MANY DENTAL DISEASES.
ON WHAT YOU AND
D.

your dentist...

- will improve your appearance
by removing stains and tartar
from teeth
- by replacing missing teeth
- by treating unsightly cavities
- by treating irritated and inflamed
gums.

- will examine teeth—using
x-rays
- to find small cavities
- to find early signs of pyorrhea
- to find other defects, such as
impacted and diseased teeth.

- will treat and fill small cavities
- will remove unsavable teeth that
endanger health
- will replace missing teeth
- will treat diseased gums and
pyorrhea.



encouraging. Caution is necessary because too much fluorine in water may cause mottled enamel (white or brown blemishes in the enamel) and because the fluorine salts must be handled carefully by water plant operators for their own protection.

GINGIVITIS

Gingivitis or inflammation of the gums may be initiated by uncleanliness of the teeth, tartar deposits, chemicals such as lead, mercury, or phosphorus, bacterial infections, dietary deficiencies, systemic diseases, or malocclusion of the teeth. Inflammation of the gums may be an uncomplicated and easily curable condition, or it may be the forerunner of serious mouth disease.

PYORRHEA

Periodontitis (commonly called pyorrhea) is a disease of the supporting structures of the teeth, involving destruction of the bone. It is considered to be one of the chief causes of tooth loss among persons 35 years of age and over. Pyorrhea is dangerous to the general health, because infection from diseased bone and gums may spread to other parts of the body.

VINCENT'S INFECTION

This infection known as trench mouth is a serious, painful and contagious disease of the gums, characterized by extreme inflammation and soreness of the gums. The condition sometimes spreads rapidly until it affects the whole mouth, including the throat and tonsils. Severe attacks may cause dangerous illness and even death.

IMPACTED TEETH

When the third molars or wisdom teeth have insufficient room to grow in their proper places they become impacted—that is, they are wedged into the jaw in abnormal positions. By means of x-ray pictures the dentist can study impacted teeth and tell whether or not they should be removed.

MALOCCLUSION

This term means irregularity of the teeth and abnormal relations between the upper and lower jaws (when grinding surfaces of the upper and lower teeth do not match). About 50 percent of all children have some type of malocclusion, such as

protruding teeth or teeth growing in positions other than their normal ones. Malocclusion may be caused by—

1. Too-early loss or too-long retention of baby teeth.
2. Thumb-sucking, tongue-, lip-, or cheek-biting, mouth breathing, and similar habits.
3. Illness or malnutrition during childhood which interrupts the growth and development of the face.
4. Heredity—some tendencies toward malocclusion may be inherited.

Irregular teeth are comparatively hard to keep clean and their abnormal position may contribute to caries, gingivitis, and often lead to early loss of teeth. In addition, malocclusion may cause a child to develop digestive troubles because he cannot chew food properly with his irregular teeth.

Treatment. A dentist should be consulted about any irregularity in a child's baby or permanent teeth. If treatment is needed, irregularities are often easier to correct at an early age than they would be later in life. Malocclusion can often be prevented when baby teeth are extracted by the use of "space retainers," worn until the permanent tooth is ready to assume its position. Also, malocclusion may often be corrected by orthodontic treatments whereby the teeth are moved slowly to an acceptable position. The primary objectives of orthodontic treatment are to save teeth from damaging themselves (ill-matching teeth can cause a tooth to be so loosened that it has to be extracted), to improve the function of mastication and to improve facial appearance.

PRENATAL DENTAL CARE

The expectant mother should visit her dentist as soon as she realizes she is pregnant, and she should have all necessary dental work done. She should also consult her physician about her diet during pregnancy and while nursing her baby.

It is unlikely that the mother's diet has much effect on the future dental health of her unborn child, since most of the enamel



of the deciduous (baby) teeth and all the enamel of the permanent teeth is formed after the child is born. The mother's diet, however, is important for her own general health and that of her baby. There is no reason to believe that a mother must lose "a tooth for every child."

TEETH AND FOOD

During the developmental period of the permanent teeth (from birth to 12-16 years of age), proper diet is important for the building of good teeth. The gums and tissues supporting the teeth can be directly influenced by the diet.

A good balanced diet, containing adequate amounts of milk, fruits and vegetables, meat or fish, eggs, and wholegrain cereals, is important all through life for general health, but there is no specific "dental diet."

Prevention of a great amount of dental caries may be obtained by restricting refined carbohydrates, especially sugars—reducing the intake of candies, sweet drinks, jellies, pastries, and similar highly sweetened foods.

WHAT'S NEW!

The teachings of dental colleges stressing complete diagnostic and treatment schedules rather than the immediate restorative measures once in vogue.

New and improved instruments and equipment; diagnostic aids, such as lactobacillus counts and x-ray.

Routine treatment and check-ups; completion of all indicated dental treatment.

Full utilization of orthodontia (straightening of teeth) in correcting external and internal oral abnormalities.

Topical applications of sodium fluoride.

Development of programs to combat the environmental hazards associated with occupations.

Increased skill and ability in restoring dental health.

Research in decay preventives that can be safely added to dentifrices or mouthwashes.

The well-appointed waiting rooms and offices of today's dentists conducive to a "visit."

GOOD DENTAL HEALTH FOR THE FAMILY: A SUMMING UP*

There are a number of things we can do to assure better dental health for all the family, if we learn the facts about teeth and their care, and act accordingly—

1. Maintain a well-balanced diet.
2. Be temperate in the use of sweets.
3. Clean your mouth thoroughly after eating.
4. Begin taking the children to the dentist when they are 2½ or 3 years old.
5. Encourage good mouth habits in all members of the family.
6. Have any abnormalities, even tiny cavities, corrected as soon as the dentist suggests.

If the effort for dental health is directed intelligently and is continuous, no teeth need be lost prematurely by any member of the family because of decay, and fewer for any other reasons.

MOUTH CLEANLINESS

HOME CARE OF THE TEETH

Daily toothbrushing should be encouraged for the sake of cleanliness, comfort, and personal appearance. It is likely that good home care of the teeth will prevent some decay and gum infections, but the home practices of mouth cleanliness should not be solely depended upon to prevent dental disease.

The best type of toothbrush is a small one with a straight handle and with a head not more than six bristle-tufts in length and two in width. Bristle-tufts should be only one-half inch long and set fairly wide apart. For young children a small brush or child's brush should be used.

*"Your Teeth—How to Save Them," Public Affairs Pamphlet No. 147.

The proper methods of toothbrushing, the names of approved dentrifices, and the correct method of using dental floss should be learned from one's dentist.

ORAL PROPHYLAXIS

Oral prophylaxis is a system of tooth cleansing used by a dentist. It consists of the removal of tartar and the polishing of the teeth. Most persons need a prophylactic treatment once or twice a year, some more often.

The majority of school children have some deposit or discoloration on their teeth. The amount of deposit depends upon the shape of the jaws, the shape and position of the teeth, the mineral content of the saliva, the kind of foods eaten, and the frequency, regularity, and thoroughness with which the teeth are brushed. Teeth should be cleaned periodically by a dentist or a dental hygienist.

HOW YOU CAN HELP OTHERS TO SAVE THEIR TEETH

The following objectives have been adopted by the American Dental Association for the national dental health program—they may equally apply to a dental health program for Florida communities:

1. **Help everyone to appreciate the importance of a healthy mouth.**
2. **Help everyone to appreciate the relationship of dental health to general health and appearance.**
3. **Encourage the observance of dental health practices, including personal care, professional care, proper diet, and oral habits.**
4. **Enlist the aid of all groups and agencies interested in the promotion of health.**
5. **Correlate dental health activities with all generalized health programs.**
6. **Stimulate the development of resources for making dental care available to all children and youth.**
7. **Stimulate all dentists to perform adequate dental health services for children.**



THE DENTIST IS A FRIEND

Probably the most concerned over dental health conditions in Florida children, as well as adults, are the practicing dentists of the state. In their own quiet way, dentists in cities and towns throughout the state are organizing speaker's panels, encouraging community surveys, and participating in dental health clinics.

A recent effort of the Jacksonville Dental Society culminated in Jacksonville's First Dental Health Day (in observance of National Dental Health Day, February 7). Widespread publicity through the press and radio, distribution of leaflets in the city's utility bills, a proclamation by the Mayor, and a dental health poster contest among the school children, stirred the local citizens into investigating the benefits of proper dental care.

In the past, the fear of pain kept many people away from the dentist. Today there are still far too many people who prefer a toothache to a session in the dental chair. They put off, even ignore, the obvious value of a frequent inspection.

Visiting the dentist before a tooth aches is the keynote of dentistry today. The dentist is interested in helping every member of the family make the best use of the teeth nature gave him. He can help preserve the dental health of his patients in a number of ways. The wise dentist carefully explains what needs to be done for complete teeth and mouth health so that the patient may give him the cooperation so necessary in maintaining dental health.

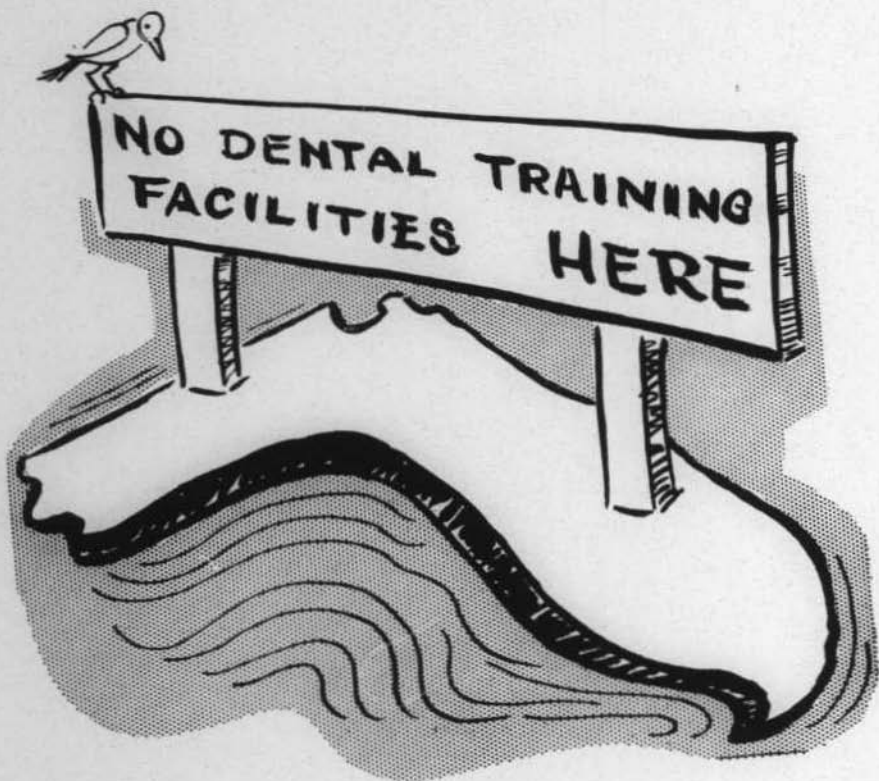
It is essential that the basic principles of dental health be understood and be made meaningful to every individual if we hope even to begin to control the problem of dental diseases. This can be done only by everyone's coordinating his information and efforts with all of the facilities that are available in each community.

That thought then leads to the number 1 problem of Florida's dental health program—

THE SHORTAGE OF DENTISTS

There are now about 800 practicing dentists in Florida which means one dentist to approximately 3,000 people. In some parts of the state the ratio of dental practitioners to the local population is incredibly low, and nine counties have no dentists at all.

Unfortunately, this situation is true of the whole United States. The deficiency in the number of dentists is even more pronounced than the shortage of physicians and at present the supply of dentists is not keeping pace with the rising population. Between 1930 and 1945 the number of dentists graduating in U. S. dental colleges annually did not compensate for the number lost through death and retirement. There are even fewer dental schools today than there were twenty-five years ago.



Florida has no dental college. Small wonder then that the young men expressing a desire to enter the dental profession are discouraged by the long waiting lists of the 40 out-of-state dental schools.

Our aim then must be to increase the supply of dentists so that we do not continue to fall behind.

Florida's 1949 Legislature is being asked to make dental internships possible in accredited hospitals in Florida without the dental internees' first having to pass the State Dental Board examination. This is one step forward in encouraging dentists to become licensed and to set up practices in Florida.

Maintaining, even increasing, the current ratio is only the first step. We wonder: can we ever hope to clear up the accumulated needs of the past? We can—by putting particular emphasis on preventive work for children and by beginning in the next decade to close up the gap between dental health needs occurring each year and the dental manpower available for the task.

In the meantime, the individual must interest himself in his own dental health, in that of his family, and in the dental problems of his community. Dental diseases are slow, insidious processes requiring day-to-day attack, right now!

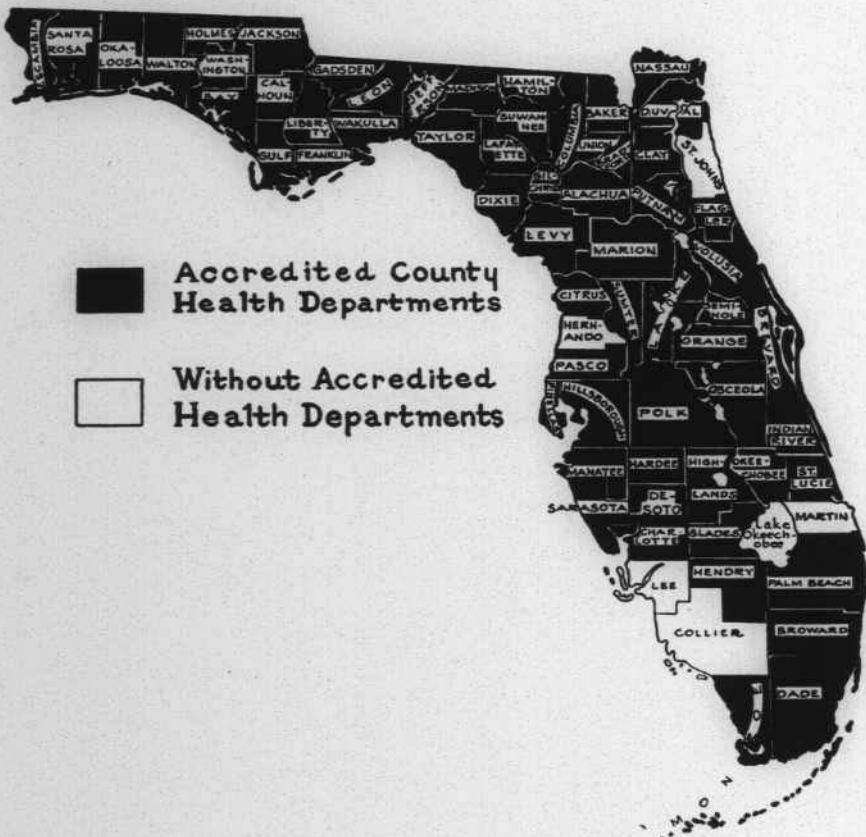
**COMBINED RESPONSIBILITY
and
COMBINED ACTION
means
BETTER DENTAL HEALTH FOR ALL!**



"The Health of the people is really the foundation upon which
all their happiness and all their Powers as a STATE depend."

—Disraeli (1877)

STATE OF FLORIDA





Florida **HEALTH NOTES**

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"CLEARING THE WAY"—

The State Board of Health

Hon. Fuller Warren
Governor of Florida

Wilson T. Sowder, M.D., M.P.H.,
State Health Officer

1217 Pearl Street or P. O. Box 210
Jacksonville 1, Florida

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Florida **HEALTH NOTES**

TO MENTAL HEALTH

A new activity in Florida is the mental health program. While limited to a few localities right now, the aims of the program are broad.

Present purpose is better awareness of conflicts within children which result in costly behavior problems. Many of these could be prevented from happening through an understanding of their behavior.

Yet how much mental illness, whether behavior problems or complicated conditions, can be prevented by a mental health program is a prime question. Right now, improved mental hygiene and fewer behavior problems is the first consideration.

FRANCES E. M. READ, M.D., *Director*
Bureau of Maternal and Child Health.



Don't make so much noise!

DON'T PLAY IN THE DIRT!

DON'T CLIMB THAT TREE!

Don't, **Don't**, **DON'T** . . . That's Bobby's world at home, a world of "don't do this" and "no, you can't do that."

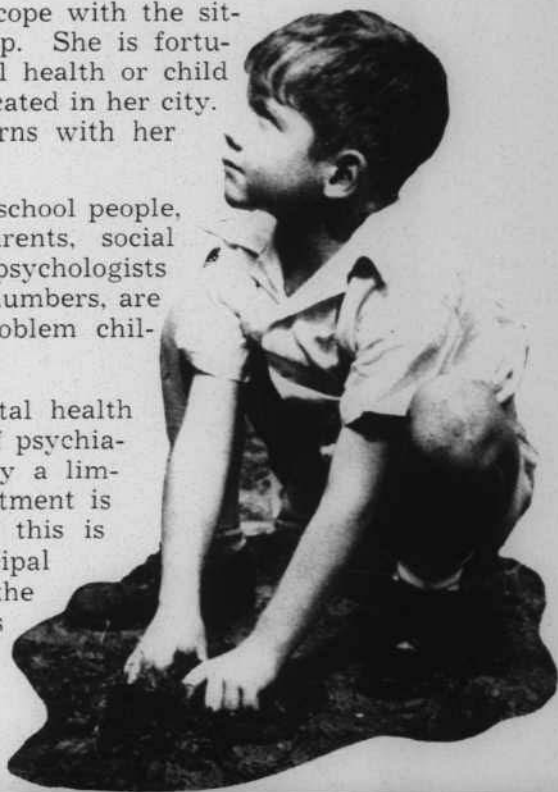
Bobby's mother is over-protective of him, but along with that attitude she has neglected to give Bobby the "right" kind of love and attention so necessary for a child's growth into a normal healthy adult.

Six year old Bobby, consequently, has no outlet at home for his energy and emotions. At school, where his mother can't watch him all day, Bobby changes from the "good boy" to the "bully." He picks fights . . . makes poor grades . . . and refuses to participate in school activities.

Bobby's teacher, unable to cope with the situation, looks elsewhere for help. She is fortunate, for one of the six mental health or child guidance clinics in Florida is located in her city. It is to this clinic that she turns with her problem.

In the mental health clinics school people, juvenile court authorities, parents, social workers, physicians, nurses, psychologists and others, in ever increasing numbers, are trying to find answers to "problem children."

It is stressed that the mental health clinics do not take the place of psychiatrists in private practice. Only a limited amount of psychiatric treatment is undertaken in the clinics and this is confined to indigents. Principal work of psychiatrists with the clinics is to screen those persons who come in for aid.



Major emphasis is being placed on helping children, for it is known that most adult personality problems begin in childhood. Parent cooperation plays a large role in correcting childhood maladjustments. Often it is the parent who is in need of mental guidance, rather than the child.

Clinic officials are emphasizing the need for early treatment in mental problems — the same as in physical ills.

Because so many people feel that there is a stigma attached to a person seeking mental guidance and help, the clinics are also trying to educate the public. They are stressing that a person attending a mental health clinic should not be classed as "crazy," but that the person should be thought of as sick mentally — just as a person visiting the doctor for cancer, tuberculosis or a common cold is sick physically.

What Happened to Bobby?

Bobby was sick mentally, so his teacher's best move was in contacting the mental health clinic. She gave a brief history of his case to the social worker who in turn visited the mother to get more facts about Bobby's actions. Then the clinic staff considered all the data carefully and decided that Bobby could and should be helped.

Staff conferences prior to accepting a case are very important. A number of children are not accepted because their problem is too advanced or because they are mentally deficient.

Bobby and his mother were invited to the clinic. He was first given a number of tests to discover his aptitudes and attitudes, and his mother was interviewed by the social worker. After a series of talks the mother began to understand how her actions had been largely responsible for Bobby's "misbehavior." Meanwhile, Bobby was given a chance to exhibit his pent-up feelings in play under the guidance of a psychotherapist.

Several weeks of guidance and counsel did much for Bobby and his mother. Bobby was no longer a "bully" and his mother gained understanding in caring for him. This typical case as seen in the mental health clinics is classed as a behavior problem.

Teachers and parents should not get excited about every little fight, scratch or bump. But if a child persists in hurting others, it is a sign that he needs special help.



OTHER PROBLEMS WITH CHILDREN

Unacceptable social behavior, such as temper outbursts, lying, stealing, destructiveness, sex "misbehavior," disobedience.

Personality problems, such as shyness, worries, fears, daydreaming.

School adjustment problems, such as dislike for school, poor work, inattention.

Vocational problems, especially for youths who are confused about the type of work for which they should prepare.

and —

Special Disabilities

Many times physical ills cause mental ills. Children with poor vision and poor hearing need special help in understanding themselves and their abilities, so as to develop other capabilities, despite their handicaps.

Crippled children who are afflicted with spastic muscles, epilepsy, or who are polio victims need special help.

Children with chronic illnesses, such as heart conditions and asthma, need to be shown their assets and capabilities, so they will not feel too keenly or be handicapped by their physical limitations.

Partially-seeing children should be separated from schools for the blind and placed in "exceptional children" classes in regular school curriculums. Those children who are hard of hearing should also be placed in classes where they can receive special attention.

The Spastics. Of all crippled and handicapped children those with cerebral palsy or the spastics are most neglected, the least understood and the most needful of our attentions. Authorities in the field have stated that there are seven spastics per 100,000 population. Out of this seven, four could be benefited by instruction.

Special help was provided for Bobby in the Clinic where he had supervised play. Here his mother also learned to assume her responsibility to Bobby by understanding his normal desires.



Special classes are necessary for children with cerebral palsy who can be helped. That is why the State Department of Education is establishing such classes wherever possible. A few private schools for spastics have also been organized in the state.

Because spastics have great difficulty in expressing themselves, there has been a tendency to underrate their intelligence. The mental health clinics are helping these children by determining whether certain types of spastic persons can be educated. Much, however, remains to be done for the estimated 1,600 educable spastics in Florida.

The Epileptics. There is one problem about which Florida, along with the rest of the country, has done too little — the epileptic. Needed is an adequate registry of all epileptics, an adult training program and a workshop to provide group therapy for parents as well as for the children with epilepsy.

According to a recent estimate, there are from 2,500 to 3,000 epileptics in this state. These people are not welcome at school, in industry, in society. In many instances, even their families are ashamed of them. According to authorities epilepsy is not inherited, yet many people feel there is a stigma attached to the disorder, that the epileptic should be kept hidden from society, his condition a secret.

It is unfortunate that so little is being done about this problem when means are available to help the epileptic become a useful member of society.

Modern science has developed a machine, the elctro-encephalograph, for tracing the brain waves. Doctors have found that by using this machine, they can determine whether or not the epileptic could be benefited by certain anti-convulsive drugs. Thus, in many cases, a number of epileptics could attend school or they could work. They could be saved from confinement in mental institutions or from becoming burdens to their families. They could lead much happier and more normal lives.

The State Board of Health has recently purchased an electro-encephalograph for use in the Leon County Mental Health Clinic. Two private institutions in the state have this machine and a few private physicians have an electro-encephalograph in their office.

FLORIDA'S MENTAL HEALTH CLINICS

With six mental health clinics, Florida leads the south in the number of mental health clinics in operation. According to national standards, however, there should be a clinic for every 100,000 people in the state and Florida should have twenty-five.

At present, mental health clinics are being operated in Pinellas, Dade, Leon, Orange, Polk and Hillsborough counties, while others are being planned for Volusia, Duval and Palm Beach counties. It is estimated that six mental health clinics now in operation in Florida serve a population of 1,300,000.

Financial support for the clinics comes from federal funds made available through the National Mental Health Act and from funds contributed by local agencies. The State Board of Health administers the funds and the program of the clinics through the local health departments.

The maximum amount of funds available from all federal and local sources for any one clinic in Florida is \$21,400, while the minimum cost of a completely staffed mental health clinic is \$35,000 to \$40,000 per year.

Due to lack of enough funds and the difficulty in securing trained personnel, most of the clinics are understaffed. Under ideal circumstances there should be a full-time psychiatrist in every clinic. This problem is met somewhat by organizing the clinics in large cities, where the services of psychiatrists and psychologists, already in private practice or employed by a college or university, can be used. In this way, Florida is fortunate in having, at the maximum, the services of trained psychiatrists for half-day sessions, three times a week.

The Pinellas County Clinic

The oldest mental health clinic in Florida is in Pinellas county where it was established in September, 1944. Growing rapidly, the clinic now has the services of a part-time psychiatrist, clinical psychologist, a psychotherapist, a psychiatric social worker, and a social worker.

As an indication that the clinic is making progress the community is becoming more and more aware of the mental health program. This is evidenced by the large number of children being taken to the clinic by their parents. During a nine-month period

in 1948, the clinic was visited by 274 patients. "Marked improvement" was shown by 39 persons upon discharge, while 72 cases showed some improvement.

The Dade County Clinic

The majority of the cases seen in the Dade County clinic are children referred to it by the school system. During 1948 two adults and 138 children were treated. The types of problems and method of handling them were essentially the same as those in the other clinics.

Present staff consists of two part-time psychiatrists, a psychologist, and a psychiatric social worker.

The Leon County Clinic

This clinic serves not only Leon County but also Panama City and the Industrial School for Boys at Marianna. The number of children treated in comparison to adults is approximately the same. There were 105 children and 102 adults seen during a ten-month period last year. Personnel includes the services of a psychiatrist, a clinical psychologist, and two social case workers. This clinic is like all others in that it has had more cases than it can handle.

MOTHER TO BLAME

Mary, age 9. Adopted. Became a problem soon after a son was born to her foster mother. Pestered the baby. Was expelled from school and placed in a private school where she still was uncontrollable. Mary and her foster mother were referred to the clinic.

The psychiatrist felt that Mary's mother displayed neurotic symptoms, that she was completely intolerant of Mary and showered all her love on the new baby. Consequently, Mary was displaying her feeling of rejection by misbehavior.

After a series of play sessions at the clinic, Mary showed marked improvement. The mother, however, still could not accept her responsibility to Mary, so the clinic staff recommended that Mary be placed in another home where she would receive more loving care.

The waiting lists of the mental health clinics throughout

the state grow, as the public becomes more aware of the services offered in the mental health program. The increased interest is encouraging, but due to the shortage of personnel, combined with the length of time required to handle each case, is it impossible to admit every new case to the mental health clinics.

The Orange County Clinic

Although the clinic was established in January, 1948, it did not operate on a full-time basis until April. The majority of the 167 children seen in 1948 was referred by the juvenile court. Twenty adults were treated. The clinic's report lists 123 patients dismissed showing "marked improvement."

The staff, consisting of a psychiatrist, psychologist and psychiatric social worker, spends approximately fifty per cent of its time examining patients referred to them by the juvenile court. This type of examination aids the court in determining what should be done with delinquent boys and girls.

The Polk County Clinic

The clinic opened in October, 1948, and during one month of operation, the children treated numbered 45. Forty per cent of the referrals came from schools and 34 per cent, from the juvenile court. The professional staff of the clinic consists of a psychiatrist, a psychologist and a social worker.

NEEDED AFFECTION

Paul, Negro boy, age 15. Had deep love for younger brother who had been murdered. After death of brother, Paul got in with "rough" gang who forced him to hold up a store. Was caught and sent to Industrial School. While there developed idea that "world was against him," wouldn't associate with others, was mentally depressed.

Another boy being seen by the mental health clinic told staff members about a boy "who was wackier" than he. Social worker saw Paul several times. He was very "closemouthed" at first but finally began loosening up. Was given play therapy at the clinic. Began to adjust himself in Industrial School activities, made friends, worked hard. Clinic recommended Paul be placed in his aunt's home where they will watch him for a year.



The Hillsborough County Clinic

The present mental health clinic originated from a marriage and family council service begun in October, 1947. Services of the clinic were expanded to include child guidance because it was felt that "the clinic could not work with children apart from the individuals who make up the children's environment."

In Volusia County

Volusia County has already done the "spade work" for a mental health clinic. A group of 343 "exceptional children" has been examined by a staff of psychologists from Rollins College while 94 of that group were examined by a psychiatrist. A full-time psychologist has been engaged to continue the studies of these children in preparation for the opening of the clinic.

TOO STRICT SUPERVISION

Jimmy, age 13. Attractive, healthy. Referred to clinic by the teacher because he was "slow" in school work, did not carry out instructions, fought with playmates.

Parents and child seen by clinic. It was discovered that Jimmy was strictly supervised at home. Parents were very cooperative in working out problem. By end of the school year, Jimmy was model student and won medal for being "outstanding citizen" in his room.

WHAT ABOUT THE STATE INSTITUTIONS?

The overall picture of the mental health problem in Florida would not be complete without mentioning the work being done by the Florida State Hospital for the mentally ill and the Florida Farm Colony for the feeble-minded and epileptics.

To these institutions go those persons whose mental condition is beyond the preventive stage but who need care; those whose mental condition has progressed beyond the scope of the mental health clinics, but who may still be helped; and those who were born with crippling conditions of the mind and body.

Some children need help in adjusting themselves to new surroundings. A planned recreational program can often do wonders in drawing a person out of himself into social contact with others. .

The Florida State Hospital

This hospital operates as an agency which undertakes the treatment of the mentally ill, their restoration to health and their return to society. But here again is a case of —

Lack of facilities to accommodate the long waiting list of persons who need to be in this institution (forty-six on the waiting list now).

Lack of facilities to adequately accommodate the approximate 7,000 patients in the hospital at Chattahoochee and the branch hospital at Arcadia.

Lack of trained personnel to carry on the big task of giving those patients the necessary treatment and attention which would return a greater percentage of them to society — in good health, physically and mentally.

Although the hospital has excellent equipment, much of it is not being used as frequently as it should be, due to the shortage of personnel.

Many factors must be considered in regard to the hospital's crowded condition. For instance, 560 patients suffering from senility were admitted in a two-year period, July, 1946-1948. This type patient is usually considered a permanent patient and presents many problems in his care. Most of them are bedridden and helpless, thereby taxing the existing medical and nursing facilities.

The hospital also cares for some cases of epilepsy. It has already been pointed out that many epileptics could become useful members of society if the help available to them were utilized.

Despite the handicaps under which it operates the Florida State Hospital is doing an excellent job, as evidenced by the 1,526 improved or restored patients discharged or furloughed in the two-year period, 1946-1948.

According to the superintendent of the hospital work of the hospital can be greatly expanded if it can secure —

separate facilities for the feeble-minded and epileptic patients.

ten additional physicians for the medical staff.

six physiotherapists.

seven occupational therapists.

six psychiatrically-trained social service workers.

a full-time recreational director.

establishment of out-patient clinics.

A psychiatric social worker was recently employed by the State Hospital to visit the patients discharged by the Institution and to keep up with their progress in maintaining mental health. With this development in the field of social work, there should be more improved follow-up studies of these patients. The establishment of out-patient clinics in strategic locations throughout the state would also prove beneficial to discharged patients. For this reason, the clinical services of the mental health clinics should be expanded to include this adult group.

The Florida Farm Colony

As in the State Hospital, practically the same conditions exist in this institution for the feeble-minded and epileptics: lack of personnel and facilities, inadequate accommodations for the patients already there, and long waiting lists. The Farm Colony should house only 450 patients, but more than 500 have been cared for at one time. As for the long waiting lists — some cases have been on the list from 8 to 10 years.

Age limit for admission to the Colony is 6 to 21 years of age. The average age of the patients there now is 23 years of age, while there are several patients who are in their 50's. It is then obvious that entirely too few patients ever "graduate" from this institution. They are either shifted to Chattahoochee or death claims them — except when their families "reclaim" them.

The fact that the Farm Colony cannot accept cases under 6 years of age poses a problem, especially for families of children who are feeble-minded. In most cases such children need constant care and attention, creating a financial strain in many cases, plus a mental and physical strain for other members of the family. Often well children in the family of a feeble-minded person suffer because the parents are forced to devote their time to the handicapped child.

There are no facilities at the Farm Colony for Negro children, thus this group must remain a permanent burden to their families.

Other problems faced by the Colony are —

no facilities at present for the isolation of infectious diseases, such as tuberculosis.

forty to 45 spastics, some of whom are probably educable, at the Colony. This group represents a big problem for the institution and it is felt that special provision should be made for them.

approximately 150 epileptics, many of whom have daily attacks. The Colony has only one resident physician who has to divide his time between all the patients.

Some improvements are underway, such as the construction of a second story addition to the hospital and the construction of two ward buildings, a dining hall, and kitchen. It is hoped by the superintendent that the next two years will see the construction of six ward buildings.

IN THE MEANTIME —

Although the mental health program is not expected to do anything toward reducing the number of patients at the Farm Colony, it is hoped that it will in time reduce the number of patients at the Florida State Hospital.

With the use of federal funds, the Florida State Board of Health is making some training in mental health available to 93 persons —

Six clinical psychologists, one from each child guidance clinic, will attend a Mental Hospital Institute.

Ten county health officers will attend the Mental Health Institute in Mississippi, sponsored by the Commonwealth Fund.

An Institute on Growth and development, with special emphasis on mental growth, will be held in Jacksonville. Attending will be 18 public health nurses, 18 institutional nurses and 14 local health officers.

A one-day seminar will be conducted where the personnel in each mental health clinic will have an opportunity to discuss their progress with a child psychiatrist.

The director of the State Board of Health's mental health program will attend a meeting of the American Psychiatric Association, in order to learn the latest advances in mental health.

Florida Needs

A training program to provide the necessary personnel to expand the present program.

Training in mental health for public health nurses, as there are not enough mental health nurses.

A generalized educational program among the public.

More school personnel training in mental health, particularly "attendance workers" or truant officers.

More teachers taught to recognize early signs of behavior problems in children.

For Healthier Minds, Happier People



HN 5-46

—Disraeli (1877)

■ Accredited County Health Departments
 □ Without Accredited Health Departments



Florida **HEALTH NOTES**

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THE RECORD

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State Health Officer

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Jacksonville 1, Florida

Division of Health Information
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Director

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Public Health Veterinarian
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*Bureau of Maternal and Child
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Mental Health Program

Field Technical Staff
L. L. Parks, M.D., M.P.H.

Florida **HEALTH NOTES**

EVERYBODY'S BUSINESS

Health is still unfinished business in Florida and always will be. Granted that tremendous gains have been made in reducing sickness and premature death, in promoting individual and community welfare — and that our efforts are bringing results. The record, good as it is, leaves much room for improvement.

Needed is more concerted effort!

Existing health conditions must continually be studied. Local officials, community health groups, civic clubs, professional societies — even the individual — must be encouraged to establish and maintain public health services so that every person is reached.

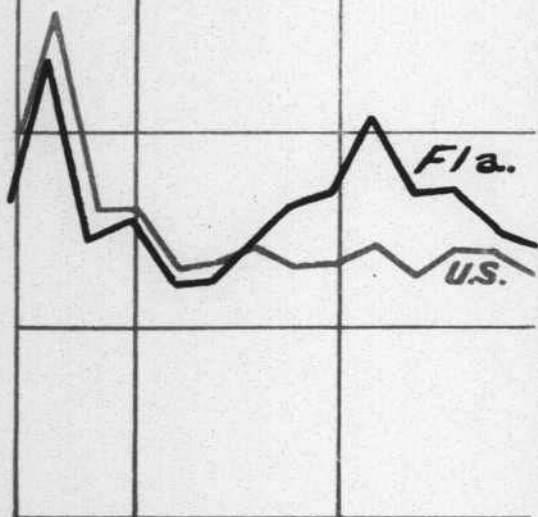
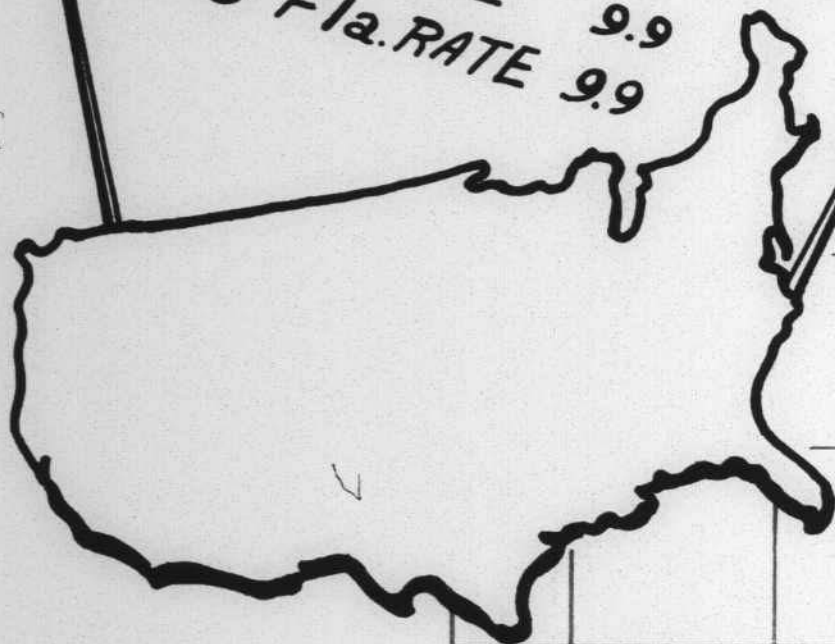
Then we must see that each person takes advantage of the health services offered. Unhealthy conditions could be improved, many deaths and much illness might be eliminated, if everybody tried to maintain good health.

Wilson T. Sowder, M.D.
State Health Officer

DEATH RATES GOING DOWN

1948 U.S. RATE 9.9

1948 Fla. RATE 9.9



Know The Truth

HEALTHY PEOPLE

The greatest asset any state can possess.

IN FLORIDA

Better health is resulting through protection, prevention and treatment of disease.

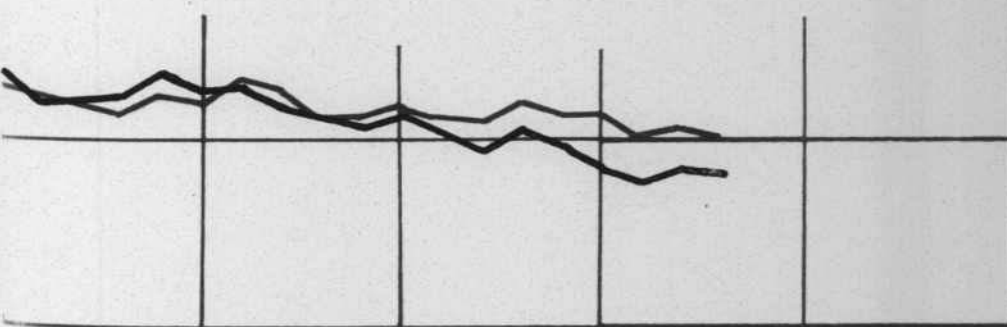
KNOW THE FACTS

What is Florida's health status?

How do we stand in comparison with the nation as a whole?

How do our standards of health relate to health services offered?

How could we improve our health services?



Hundreds Of Persons Used To Die

Since the public health program began a century ago, spectacular victories have been won over communicable diseases. In Florida alone, these diseases used to claim hundreds of lives each year. But when sanitation, immunization, and other programs of community control were set up, death and sickness from these diseases began to decline.

We Are Better Off Now Because

97% of Florida's population is served by full-time well staffed county health departments providing —

- ★ community sanitation.
- ★ control of communicable diseases, including tuberculosis, venereal diseases, and malaria.
- ★ laboratory services for local physicians.
- ★ maternal and child health services, including school health supervision.
- ★ collection and analysis of vital statistics.
- ★ health education of the public.

LAST YEAR

- 279,606 immunizations were given through county health department personnel to prevent smallpox, diphtheria, typhoid, whooping cough and tetanus.
- 403,752 field visits were made by sanitation personnel to promote community sanitation and disease control. In addition, the sanitary engineers of the State Board of Health made 1,000 visits to water supplies.
- 563,748 visits were made by health officers and nurses in homes, clinics, or offices — in the interest of improving the people's health.
- 1,930,000 laboratory examinations were performed in state laboratories in diagnosing infectious diseases and in testing food, milk and water samples.

The Record For 1948

For Infectious Diseases

★ Smallpox	NO DEATHS
★ Paratyphoid fever	NO DEATHS
★ Dengue fever	NO DEATHS
★ Rabies	1 death
★ Undulant fever	1 death
★ Tularemia	1 death
★ Scarlet fever	1 death
Acute infectious encephalitis	2 deaths
★ Gonococcus infection	2 deaths
★ Typhoid fever	4 deaths
★ Measles	7 deaths
★ Typhus fever	8 deaths
★ Malaria	11 deaths
Cerebrospinal meningitis	13 deaths
★ Diphtheria	13 deaths
★ Dysentery	18 deaths
Acute rheumatic fever	18 deaths
Poliomyelitis	19 deaths

The Leading Causes of Death

Heart disease	6,903 deaths
★★ Cancer	2,969 deaths
Cerebral hemorrhage	2,442 deaths
Accidents	1,922 deaths
Nephritis	1,487 deaths
Pneumonia & influenza	868 deaths
★★ Premature birth	782 deaths
★★ Tuberculosis	733 deaths
★★ Diabetes	496 deaths
Diseases of the arteries	468 deaths

★ PROVING THAT DEFINITE CONTROL MEASURES
CAN LESSEN NEEDLESS DEATHS

★★ POINTING TO THE NEED FOR CONCERTED EFFORTS

Look At The Record For The Past 30 Years

	Percent Reduction In Death Rates*
TUBERCULOSIS	73.4
DIARRHEA AND ENTERITIS	94.1
TYPHOID FEVER	98.8
MALARIA	99.0
INFECTIOUS DISEASES OF CHILDHOOD	93.6
(Measles, scarlet fever, whooping cough, diphtheria)	
MATERNAL MORTALITY	81.0
INFANT MORTALITY	64.3

When the public health program of Florida is judged by the main objective of public health — the prevention and control of disease — it has succeeded admirably. Diseases in epidemic form have not occurred in many years. Deaths from malaria, typhus fever, typhoid fever, diphtheria, dysentery and pellagra have been reduced to less than one per 100,000 population. The death rates from tuberculosis, syphilis, diarrhea and enteritis and whooping cough have been reduced to less than half of what they were thirty years ago.

TREND OF DIPHTHERIA DEATH RATES IN FLORIDA, 1917-1948



To evaluate our public health program we can and constantly do compare our efforts with the results — the lowering of death rates and the improvement of health problems within the state. In comparing our statistical evidences with those of other states, we get only an approximate comparison. Since climate, population, public health and medical facilities, economic resources, and culture are related to the measurement of health, they too must be considered.

Statistical data for the year 1946, the latest available for all the states, reveal that Florida's death rates follow closely the general trend of the national average. In 1946 Florida's overall death rate was the same as that for the United States (10.0 per 1,000 population). Preliminary data for 1948 indicate that the two rates are again the same — 9.9 per 1,000 population.

Being "average" is not noteworthy. The number of deaths from many preventable diseases should be lower, but where public health campaigns have been directed at certain diseases, the death rates have been greatly reduced.

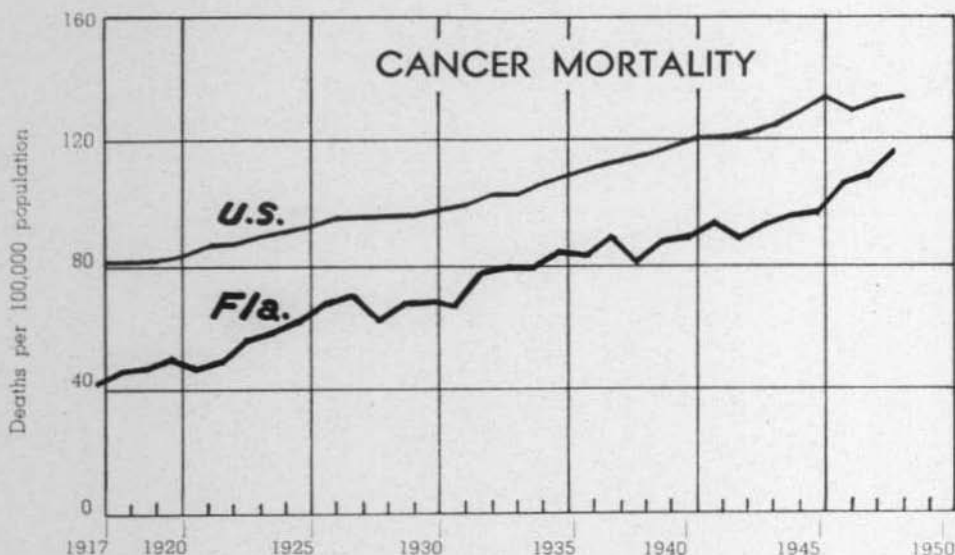
Our Changing Problems

CANCER

As elsewhere in the United States, the death rate from cancer in Florida has shown an uninterrupted increase during the past years and is the second leading cause of death. To combat this disease a cancer control law passed in 1947 provides a four-point program:

- ★ education
- ★ establishment of tumor clinics
- ★ tissue diagnostic service to all needy patients
- ★ financial aid in diagnosis and treatment of medically indigent patients, within the limits of available funds.

Early diagnosis is one of the most important factors in the prevention of death from cancer. Early treatment means early cure in a large percentage of cases.



Tumor clinics for this purpose have been established in Jacksonville, West Palm Beach, Miami, Tampa and Pensacola by the county medical societies, according to the standards of the State Board of Health and the American College of Surgeons. Additional tumor clinics are planned in Tallahassee, Orlando, Lakeland, Fort Lauderdale, and St. Petersburg. Some financial support has been given to detection clinics in Ocala, Gainesville, DeLand, and Daytona Beach.

Accomplishments since the inauguration of the cancer control program are noteworthy and much credit is due the medical profession of the state which individually has rendered diagnostic and treatment services and collectively has supported and cooperated in all phases of the program.

During 1948, 1,503 cases were approved for state aid under the cancer control program as having malignancy or a suspected malignancy. Fifty-two percent of these were found to have cancer or other malignant tumors. Of this group 337 were hospitalized for treatment, 202 received surgery, 554 x-ray therapy and 90 radium therapy. Some of the cases received a combination of all three types of treatment. The greatest number of cases were discovered in the 45-64 age groups.

Figures reveal where the major emphasis should be directed to reduce the number of deaths from cancer; namely, the digestive organs, the reproductive organs, the respiratory system, and the breast. Improvement in diagnostic methods, early diagnosis and adequate immediate treatment should reflect a reduction in deaths from cancer in these locations.

PREMATURE BIRTH

Approximately half of the infant deaths in the country are among the prematurely born infants. The death rate is high because these babies are not obtaining the emergency attention and facilities so necessary in premature care.

The problem involved in providing early and continuous medical supervision for premature babies is complex indeed. This can be realized by a study of the 16-point program for premature care being prepared by the State Board of Health's Bureau of Maternal and Child Health. Major points emphasize the need for —

- ★ Medical and nursing services available to all premature infants regardless of place of residence and race.
- ★ Prompt reporting of premature births for transportation from the home or smaller hospital to a central unit where facilities are available for premature care.
- ★ Coordinated transportation arrangements providing a heated oxygenated carrier with special suction facilities and a nurse thoroughly familiar with special nursing care.
- ★ Continuous care of every premature infant in hospitals by qualified physicians.
- ★ Continuous nursery care under the direct supervision of specially trained nurses.
- ★ Attainment in hospitals of standards recommended for the care of the premature infant by the American Academy of Pediatrics.
- ★ Pediatric services available to all premature infants.
- ★ Home visit by public health nurse prior to discharge from hospital to investigate possibility of infection and preparedness of family to receive infant.
- ★ Proper instruction of mother in care of prematurely born infant.
- ★ Financial assistance for those unable to pay for such care.
- ★ Knowledge of availability of incubators provided through county health departments.
- ★ Widespread education and promotion of better facilities and care of premature infants.

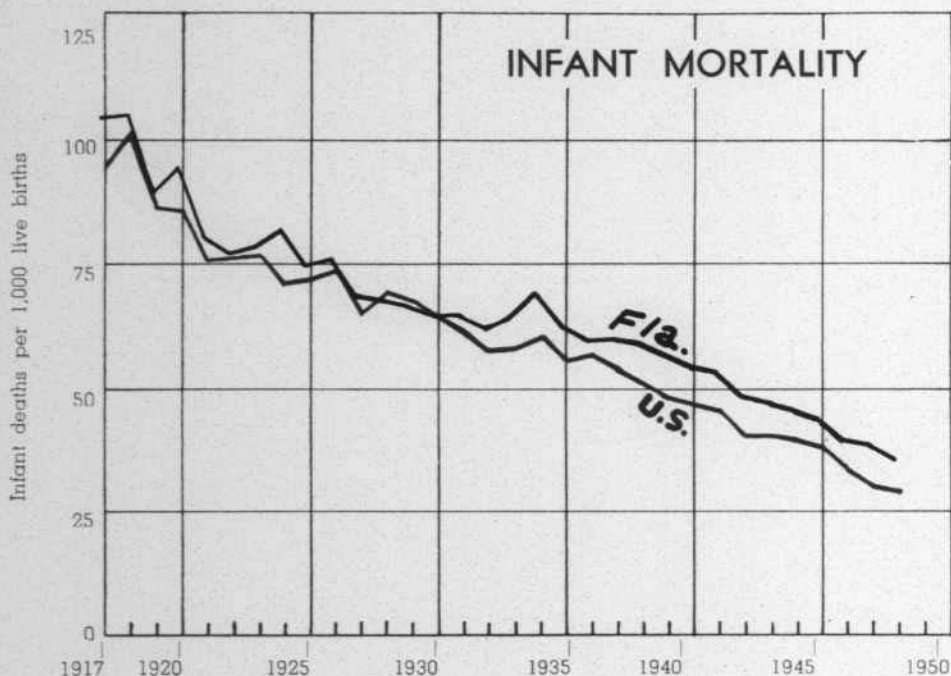
Unfinished Health Business

Rank	Deaths from All Causes		Heart Disease		Cancer		Diabetes	
	State	Rate ^b	State	Rate	State	Rate	State	Rate
1	Utah	7.5	New Mexico	151.2	North Carolina	69.3	Arizona	10.1
2	Arkansas	7.6	Mississippi	172.9	South Carolina	70.0	Arkansas	10.8
3	North Carolina	7.9	North Carolina	183.5	New Mexico	75.6	New Mexico	11.5
4	Wyoming	8.1	South Carolina	185.4	Arkansas	76.2	Alabama	11.9
5	Oklahoma	8.4	Alabama	189.5	Georgia	78.0	Wyoming	12.2
6	South Carolina	8.6	Arkansas	189.5	Arizona	79.5	Georgia	12.8
7	Texas	8.6	Georgia	189.5	Mississippi	79.7	Texas	13.0
8	Louisiana	8.7	Texas	201.7	Alabama	80.5	Tennessee	13.1
9	Alabama	8.8	Arizona	205.4	Utah	83.1	South Carolina	13.6
10	Georgia	8.8	Oklahoma	205.6	Wyoming	86.7	North Carolina	13.7
11	West Virginia	9.0	Utah	215.3	Texas	92.3	Louisiana	14.2
12	Michigan	9.1	Tennessee	217.5	Virginia	92.7	Mississippi	14.8
13	Arizona	9.2	West Virginia	222.1	West Virginia	94.1	Oklahoma	15.8
14	Mississippi	9.2	Wyoming	227.1	Tennessee	95.1	Kentucky	16.2
15	Oregon	9.2	Louisiana	236.4	Louisiana	99.5	West Virginia	16.9
16	Tennessee	9.2	Virginia	249.1	Oklahoma	101.7	Nevada	17.7
17	Virginia	9.4	Florida	249.5	Kentucky	102.2	Virginia	18.1
18	Minnesota	9.5	North Dakota	258.8	Nevada	110.0	Florida	18.6
19	North Dakota	9.5	Kentucky	260.3	Florida	110.3	Utah	18.7
20	Colorado	9.7	Oregon	260.5	Idaho	119.4	Colorado	19.1
21	Idaho	9.7	Idaho	268.0	Michigan	123.3	California	20.2
22	Kansas	9.7	South Dakota	268.2	Washington	124.6	Idaho	20.3
23	Dist. of Col.	9.8	Dist. of Col.	274.7	Oregon	125.5	Oregon	20.9
24	Nebraska	9.8	Colorado	280.1	North Dakota	125.7	Washington	21.4
25	Washington	9.8	Kansas	290.9	Colorado	127.2	South Dakota	21.9
26	California	9.9	Michigan	292.5	Maryland	127.4	Kansas	23.5
27	Florida	10.0	Minnesota	296.1	Indiana	128.4	Missouri	24.0
28	Kentucky	10.0	Nevada	300.6	Kansas	129.6	Delaware	24.1
29	Maryland	10.0	Nebraska	306.8	Delaware	130.2	Maryland	24.6
30	Iowa	10.1	Indiana	307.0	South Dakota	131.1	Michigan	25.4
31	South Dakota	10.1	Iowa	309.6	California	134.2	Indiana	25.6
32	Wisconsin	10.2	Washington	315.2	Dist. of Col.	134.4	Dist. of Col.	26.2
33	New Mexico	10.3	Maryland	318.4	Nebraska	137.5	Minnesota	26.3
34	Indiana	10.4	California	319.4	Montana	138.4	Iowa	26.5
35	Ohio	10.4	Ohio	324.9	Minnesota	141.1	Maine	26.8
36	Colorado	10.6	Wisconsin	330.9	Ohio	141.4	Nebraska	27.9
37	Pennsylvania	10.7	Montana	340.5	Iowa	145.6	Ohio	28.2
38	New Jersey	10.8	Connecticut	348.0	Missouri	146.9	North Dakota	28.5
39	Rhode Island	10.8	Missouri	348.1	Pennsylvania	147.5	Montana	28.6
40	Nevada	11.1	Maine	352.9	Wisconsin	152.6	Vermont	30.9
41	New York	11.1	Pennsylvania	360.8	Connecticut	154.4	Illinois	32.1
42	Illinois	11.2	Delaware	374.1	Rhode Island	156.0	Wisconsin	32.2
43	Massachusetts	11.2	New Jersey	377.5	Maine	159.0	New Jersey	32.6
44	Missouri	11.2	Vermont	393.8	Vermont	160.1	New Hampshire	32.9
45	Delaware	11.3	Illinois	396.2	Illinois	160.8	Pennsylvania	33.2
46	Maine	11.5	New Hampshire	404.5	New Hampshire	161.2	Connecticut	33.7
47	Montana	11.7	Rhode Island	406.0	New Jersey	168.3	Massachusetts	34.5
48	New Hampshire	11.7	Massachusetts	411.8	Massachusetts	169.1	Rhode Island	36.3
49	Vermont	11.7	New York	423.3	New York	174.6	New York	38.7
	United States	10.0	United States	306.8	United States	130.1	United States	24.8

Figures taken from data published by National Office of Vital Statistics.
^bRate per 1,000 population.

—Florida And Elsewhere

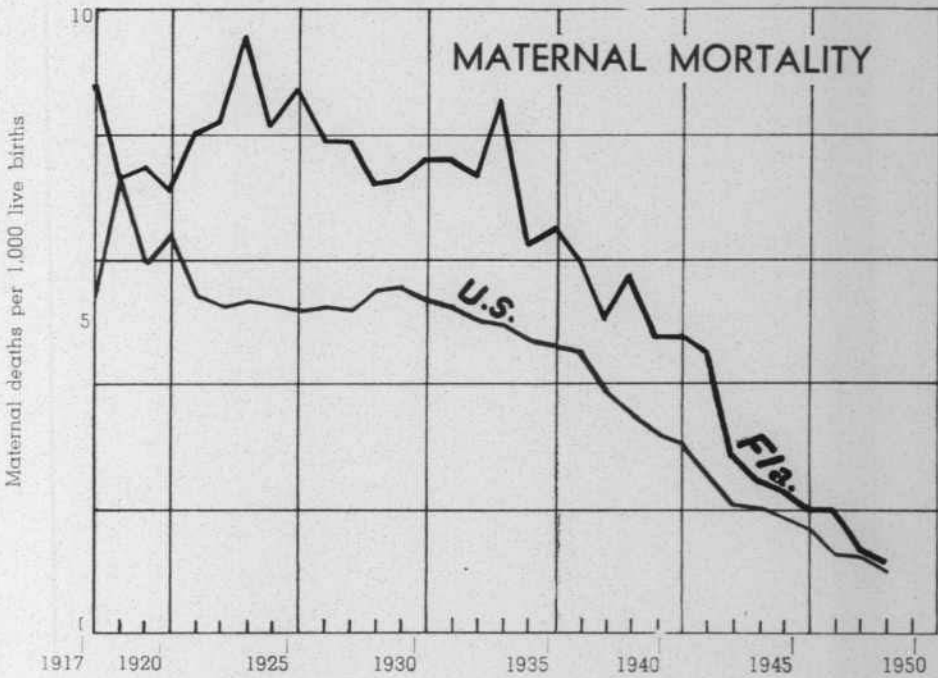
Syphilis		Whooping Cough		Diphtheria		Tuberculosis		RANK
State	Rate	State	Rate	State	Rate	State	Rate	
Idaho	4.0	North Dakota	0.2	Dist. of Col.	0.2	Wyoming	10.7	1
Vermont	4.2	South Dakota	0.2	Connecticut	0.3	Iowa	12.9	2
Utah	4.7	Connecticut	0.3	New Jersey	0.3	Utah	13.0	3
South Dakota	4.9	Massachusetts	0.3	Rhode Island	0.3	Nebraska	13.9	4
Massachusetts	5.1	Nebraska	0.3	Idaho	0.4	Idaho	14.2	5
North Dakota	5.4	Dist. of Col.	0.4	Illinois	0.4	Kansas	16.5	6
Wisconsin	5.4	Florida	0.4	New Hampshire	0.4	North Dakota	17.9	7
Maine	5.6	Illinois	0.4	New York	0.4	Wisconsin	20.5	8
Connecticut	5.8	Montana	0.4	Michigan	0.5	Minnesota	20.7	9
Rhode Island	5.8	California	0.5	Iowa	0.6	Oregon	21.4	10
Iowa	6.1	Colorado	0.5	Kansas	0.6	New Hampshire	22.4	11
Nebraska	6.5	New York	0.5	Missouri	0.6	Maine	24.7	12
Minnesota	6.7	Oregon	0.5	Nebraska	0.6	South Carolina	29.4	13
North Carolina	6.7	Rhode Island	0.5	Pennsylvania	0.6	Indiana	29.9	14
New Jersey	6.9	Minnesota	0.6	Utah	0.6	Connecticut	30.0	15
New Hampshire	7.2	New Jersey	0.6	Vermont	0.6	Rhode Island	31.1	16
Kansas	7.7	Iowa	0.7	Wisconsin	0.6	Florida	31.2	17
Arkansas	7.9	Kansas	0.7	Delaware	0.7	Michigan	31.2	18
Kentucky	7.9	Maryland	0.7	Nevada	0.7	South Dakota	31.4	19
Oregon	8.3	Michigan	0.7	Ohio	0.7	Oklahoma	31.8	20
Washington	8.3	Washington	0.7	Oregon	0.7	North Carolina	32.5	21
Wyoming	8.7	Missouri	0.8	Massachusetts	0.8	Washington	32.7	22
Oklahoma	8.9	Ohio	0.8	Tennessee	0.8	Missouri	33.8	23
Tennessee	8.9	Vermont	0.8	Alabama	1.0	Georgia	34.2	24
Michigan	9.1	Wisconsin	0.8	California	1.0	Montana	34.3	25
Pennsylvania	9.2	Wyoming	0.8	Indiana	1.0	Ohio	34.4	26
Texas	9.2	Pennsylvania	0.9	Montana	1.0	Colorado	35.3	27
Colorado	9.3	Utah	0.9	South Dakota	1.1	Mississippi	35.3	28
Illinois	9.4	Delaware	1.0	Washington	1.1	Massachusetts	35.3	29
New York	9.5	Louisiana	1.0	Wyoming	1.1	Vermont	35.5	30
Montana	9.8	Arkansas	1.1	Oklahoma	1.2	Pennsylvania	36.9	31
California	10.1	Indiana	1.1	West Virginia	1.2	Arkansas	37.1	32
Mississippi	10.3	Oklahoma	1.1	Florida	1.3	Illinois	37.5	33
Arizona	10.4	Alabama	1.3	North Carolina	1.3	New Jersey	38.3	34
Indiana	10.4	Idaho	1.3	North Dakota	1.3	West Virginia	39.7	35
Ohio	10.4	Texas	1.3	Georgia	1.4	Alabama	40.0	36
West Virginia	10.8	Mississippi	1.5	Maryland	1.4	New York	40.8	37
Georgia	10.9	Nevada	1.5	Virginia	1.4	California	41.5	38
Alabama	11.3	North Carolina	1.6	Minnesota	1.5	Texas	42.0	39
Virginia	11.3	South Carolina	1.6	Mississippi	1.5	Louisiana	43.2	40
Delaware	12.2	Kentucky	1.7	South Carolina	1.5	Virginia	43.5	41
Missouri	12.3	Maine	1.7	Texas	1.6	Delaware	46.4	42
Florida	12.9	New Hampshire	1.7	Colorado	1.7	Nevada	53.9	43
South Carolina	13.1	Tennessee	1.7	Louisiana	1.7	Maryland	54.2	44
Maryland	13.4	West Virginia	1.8	Kentucky	1.9	Tennessee	54.4	45
Dist. of Col.	13.6	Virginia	1.9	Arkansas	2.1	Dist. of Col.	57.9	46
New Mexico	14.4	Georgia	1.9	Maine	2.1	Kentucky	59.3	47
Nevada	16.2	Arizona	2.6	New Mexico	2.3	New Mexico	73.3	48
Louisiana	16.7	New Mexico	4.2	Arizona	2.7	Arizona	116.7	49
United States	9.3	United States	0.9	United States	0.9	United States	36.4	



Infant and Maternal Mortality. In 1946 Florida ranked 47th among the 48 states in maternal death rates. However, the maternal death rate has decreased rapidly in this state during the past seven years — dropping from 6.1 in 1941 to 1.9 in 1948.

In deaths of infants under one year of age, Florida ranked 39th among the 48 states in 1946. Provisional data for 1948 gives hope that Florida has moved up to 33rd place. The infant death rate of the non-white population in Florida is about fifty percent higher than the white rate, but in comparison with the non-white population of other states, our non-white rate places Florida 27th.

The decreasing maternal and infant mortality rates indicate an increasing volume of medical services for mothers and children. In Florida the problem is being attacked through state-directed surveys, training of midwives and the prenatal and well-baby services of the county health department clinics. Through these services more mothers are being given a better chance to live through childbirth — more babies, a chance to survive the hazardous early years of life.



TUBERCULOSIS

The general trend in tuberculosis deaths is downward. This disease can be eradicated, if tuberculosis is found before it is too late, then isolated and properly treated in a sanatorium. Early diagnosis is essential to best treatment and is vitally important in preventing the spread to other persons.

Utilizing the latest method of case-finding, the State Board of Health's Bureau of Tuberculosis Control is making remarkable progress in finding and isolating persons with tuberculosis. Of the 415,599 persons x-rayed last year, as many as 413,599 of them learned that they did not have tuberculosis.

The goal is to x-ray as many adult citizens as possible and to provide proper care for every tuberculosis patient. The State Tuberculosis Board and the State Tuberculosis and Health Association work in close cooperation with the State Board of Health and its affiliated county health departments in providing this service. These three agencies are sponsoring a plea for a more well-equipped and well-staffed sanatoria in the state, as well as a request for additional tuberculosis hospital beds, so that case-treatment will not lag behind case-finding.



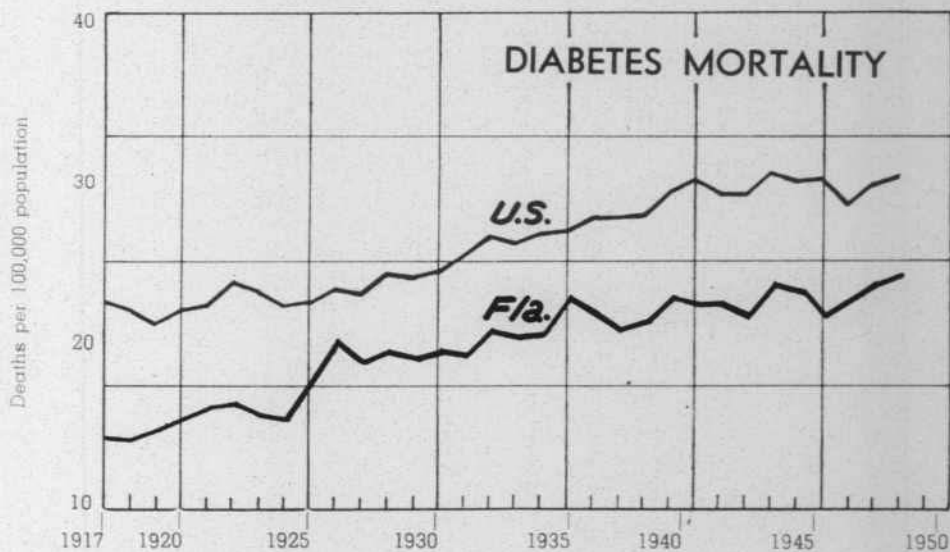
CHEST X-RAYS ARE AVAILABLE TO ALL PEOPLE IN FLORIDA

In 1946 Florida ranked 17th among the 48 states in tuberculosis death rates. The white tuberculosis death rate was 37 percent lower than the comparable U. S. rate and the non-white tuberculosis death rate was 33 percent lower.

DIABETES

An important step in promoting better health among adults is the control of diabetes which claimed 496 lives last year in Florida. An estimated 30,000 more have this disease.

These people should be reached—to show them how they might live happier, longer lives. The vital product insulin, so necessary in diabetic care, is available to everyone needing it. Those unable to afford the cost can get it free from the State Board of Health.



The State Board of Health is organizing a statewide diabetes control program to provide —

- ★ continued distribution of insulin to every indigent diabetic person.
- ★ widespread education of the public concerning diabetes, its recognition and prevention.
- ★ education of the diabetic patient in following his doctor's orders properly.
- ★ a campaign for finding cases of diabetes early.

From as far back as 1935 the State Legislature has been providing insulin to needy diabetics through the State Board of Health. With the ever expanding case-finding program this need has been increasing continually. Then as a start to the statewide program, the U. S. Public Health Service has placed a diabetes demonstration unit in Jacksonville in cooperation with the Duval County Medical Society and the State Board of Health. Florida is one of two states having a diabetes unit to demonstrate the value of education in diabetes control.

VENEREAL DISEASES

Year after year 15,000 to 20,000 new cases each of gonorrhea and syphilis are reported to the Venereal Disease Control Division of the State Board of Health.

One might ask "Are we making progress in venereal disease control?" Actually, there was a decrease of 1,000 cases or more for both syphilis and gonorrhea during 1948. This is good news. Our population has increased yet the number of venereal disease cases has decreased.

The number being reported and under treatment is still significant but should be no cause for pessimism, because paradoxically, the more syphilis and gonorrhea being treated by practicing physicians and venereal disease clinics, the less we have to fear the spread of these diseases.

Modern treatment has become so effective that the treatment of gonorrhea may be accomplished in better than 95 percent of the cases with a single injection of penicillin, and four times out of five, a case of syphilis may be cured in a week or ten days with penicillin treatment. The number of cases of syphilis and gonorrhea under treatment, therefore, is not a true index of increas-

ing prevalence. We must continue treating large numbers of cases of syphilis and gonorrhea annually until the hidden reservoir is exhausted. Eventually these diseases should be treated out of existence.

In 1946 Florida's syphilis death rate was 39 percent higher than the U. S. rate and placed Florida 43rd in the nation. But during the twelve year period, 1933-1945, mortality from syphilis decreased in Florida more than in any other state, from 36.3 to 13.1, while for the United States as a whole the mortality decreased from 15.1 to 10.7.

TYPHUS FEVER

Worried over the apparent rise in typhus fever deaths, the State Board of Health started a typhus fever survey program in 1946 with the aid of the Rockefeller Foundation. By 1948 the number of deaths had dropped from 34 in 1944 to eight.

Control of this disease lies in the extermination of rats and in the rat-proofing of buildings, because the rat flea transmits typhus fever to man. Control of typhus fever in Florida is reflected by the 80 percent reduction in the death rate. The sickness rate also dropped in the four year period, 1944-1948, from 22.0 to 6.7. This control may be due to several factors —

- ★ the widespread purchase and use of DDT and other sprays.
- ★ the rat-proofing programs of county health departments.
- ★ the typhus fever survey program of the Rockefeller Foundation.

Every case or suspected case of typhus fever in Florida has been investigated by specially trained investigators. Their purpose has been to learn where the disease was contracted and to make follow-up studies on persons coming in contact with the disease. Homes, rather than places of business, were found to be the most common source of rat infestation.

A key point in the typhus fever control program is the recognition of typhus fever when it occurs. Positive diagnosis is possible through laboratory examinations and physicians are being urged to use the laboratory as an aid in diagnosing this disease.



CONDITIONS SUCH AS THESE HARBOR AND BREED RATS,
FLIES, MOSQUITOES AND OTHER PESTS WHICH MAY
CARRY DISEASE OR BE NUISANCES TO BETTER LIVING

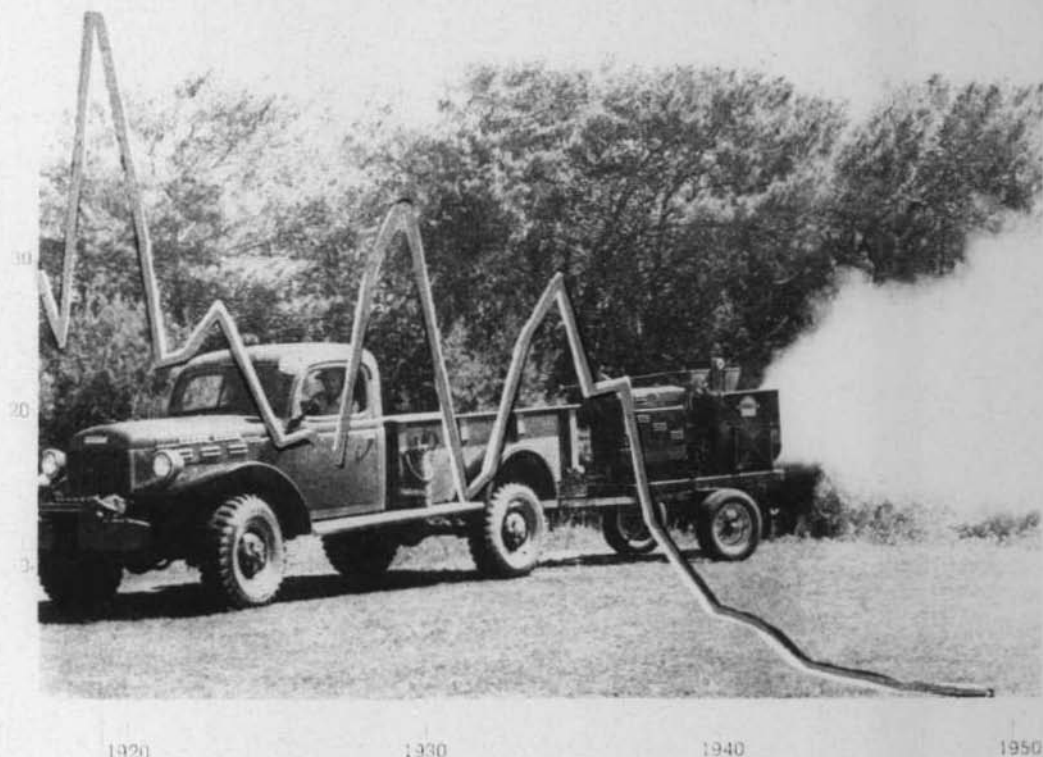
HOOKWORM

MALARIA

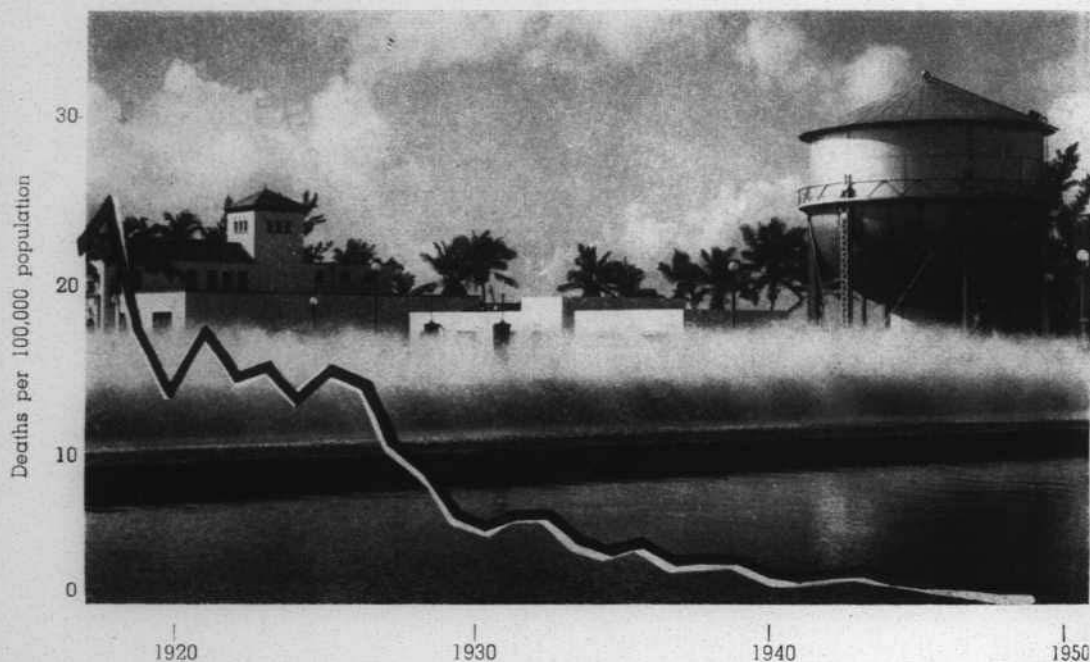
Hookworm is a public health and economic problem of Florida which is being eradicated through widespread education and improvement of sanitary conditions in the rural areas. Last year approximately 3,000 sanitary privies were either built or restored to sanitary condition through county-wide sanitation programs.

Another disease causing more ill health than death, is malaria, but through concerted mosquito control measures the incidence of this disease is decreasing to such an extent that it is not a major problem in Florida now. However, control measures against the mosquito must be maintained continuously to prevent malaria from recurring.

TREND OF MALARIA DEATH RATES IN FLORIDA, 1917-1948



TREND OF TYPHOID DEATH RATES IN FLORIDA, 1917-1948



TYPHOID FEVER

Once a dread disease reaching epidemic proportions, typhoid fever claimed only four lives last year in Florida. Improved sanitation and widespread immunization will soon eliminate this disease.

There was an increase last year in the number of typhoid carriers needing surveillance under health department rules and regulations. Many of these migrated here from other states and most of them voluntarily reported to local health departments for surveillance. Typhoid carriers are investigated every six months by local health officers.

SANITATION

Through control measures over the environment in which people live and work, the public health program seeks first to promote the health and happiness of the people. Beyond protecting the health of the people, environmental sanitation or "community housekeeping" also encourages the economic growth and prosperity of the state.

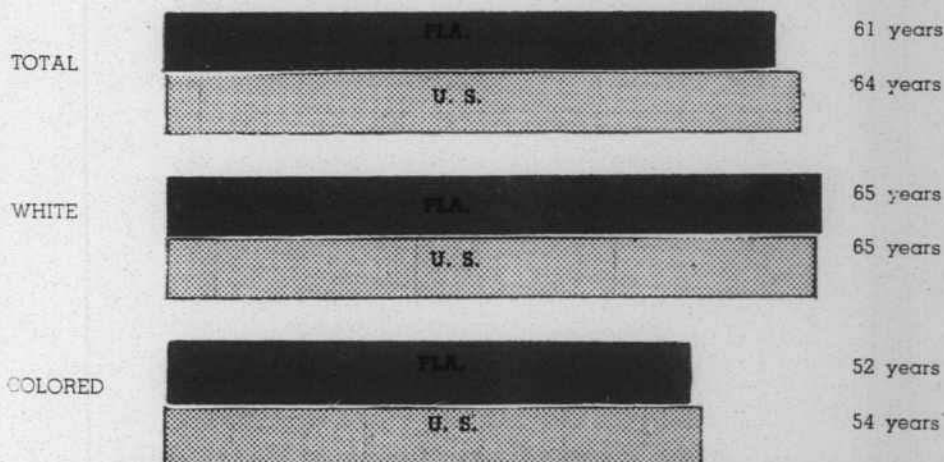
We have state laws and local ordinances which set high standards for water, milk and food supplies, sanitation of public places, and elimination of disease-bearing animals and insects. We have well-trained state and local staffs of public health engineers and sanitarians to maintain standards, instruct responsible persons and inspect establishments. We have well-directed programs aimed at —

- ★ safe water supplies.
- ★ sanitary disposal of human excreta, garbage and industrial wastes.
- ★ clean, sanitary tourist and trailer camps.
- ★ sanitary eating and drinking places and foodhandler training schools.
- ★ safe production and distribution of seafoods.
- ★ safe, sanitary recreational facilities such as camps, parks, and swimming places.
- ★ healthful school surroundings.
- ★ community control of rats, flies, mosquitoes, and other pests which may carry disease or be nuisances to better living.

OTHER TARGETS

Florida's health program has expanded to include the many and varied public health activities which depend upon the needs and funds available to finance them. These are broad in scope and include many services to the people. The net results show that by reducing sickness and premature death and by promoting individual and community welfare —

Life Expectancy is Increasing



COMPARISON OF LIFE EXPECTANCIES, FLORIDA AND THE UNITED STATES,
AS OF 1940

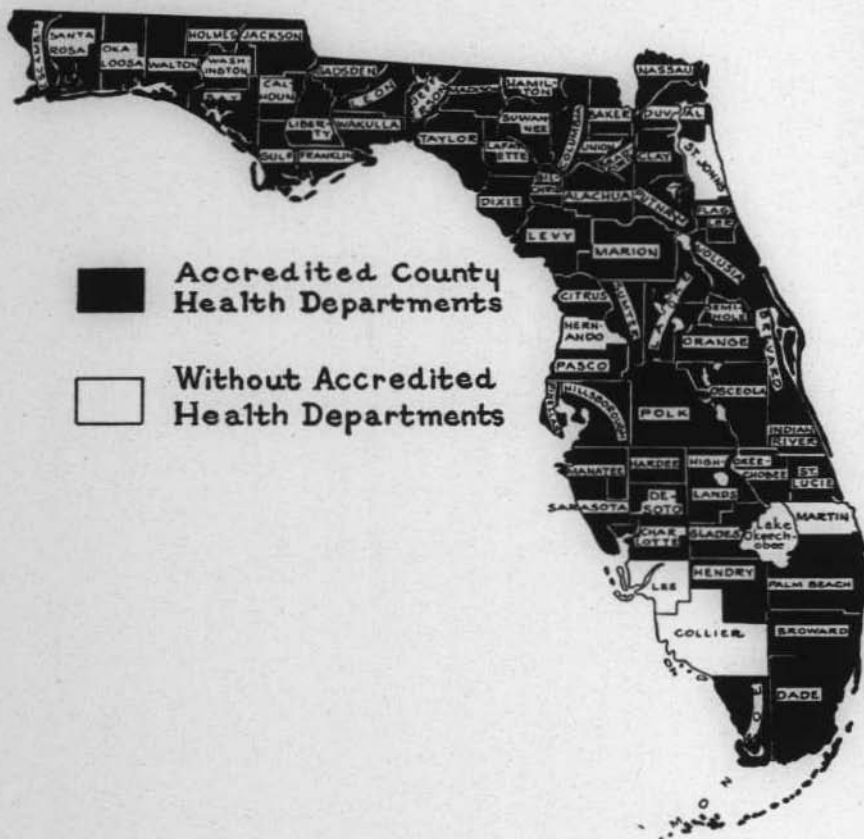
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"The Health of the people is really the foundation upon which
all their happiness and all their powers as a STATE depend."

—Disraeli (1877)

STATE OF FLORIDA

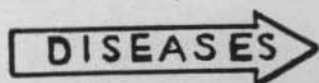




Florida **HEALTH NOTES**

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ANIMALS



MAN

The State Board of Health

Hon. Fuller Warren
Governor of Florida

Wilson T. Sowder, M.D., M.P.H.,
State Health Officer

1217 Pearl Street or P. O. Box 210
Jacksonville 1, Florida

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	Hamilton	Jasper	
	Hardee	Wauchula	
	Hendry	La Belle	
	Highlands	Sebring	
	Hillsborough	Tampa	
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	Madison	Madison	
	Manatee	Bradenton	
	Marion	Ocala	
	Monroe	Key West	
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Florida HEALTH NOTES

FOREWORD

The Florida State Board of Health is ever on the alert to protect your health. One of its many preventive activities concerns diseases of animals which may be transmitted to man. They are an outstanding public health problem.

Recognizing this fact, the Florida State Board of Health expanded its program two years ago to include such problems. Dr. James E. Scatterday, public health veterinarian, was employed to direct the program. He works with state, federal and local agencies in promoting programs of diagnosis, control and prevention of those animal diseases *which are a menace to man*.

This program is divided into two parts — the detection and control of such diseases in animals and inspection of food products of animal origin, primarily milk and meat.

This issue of Health Notes, we hope, will help you to understand more clearly the part that you can play in helping to control and eradicate diseases of animals which may affect you and your neighbors. These animal diseases are also responsible for tremendous economic loss to Florida.

FOE or



FRIEND?



WANTED—a good home for my dog. Will not sell but will give to a person who loves pets. Call _____

You have probably seen similar advertisements in your newspaper many times — advertisements which reflect our love and concern for our pets.

If you own a pet you know the happiness and companionship you derive from your animal friend. But through our close contact with animals and through food supplies of animal origin, we have contracted diseases from them. We get “in the way” of germs as they pass from animal to animal, or from animal to man.

Thus our innocent friends are placed in the peculiar position of bringing us food and clothing, happiness, and also being able to cause us suffering, economic loss, and even death. It should be remembered that they also save millions of people from painful illnesses through animal experimentation and medical research.

It is necessary for us to be as realistic about our animals as we are about our human friends. For instance, you wouldn't dream of allowing your best friend to enter your home if he was suffering with smallpox, would you? You'd wonder why he hadn't protected himself against the disease through vaccination. The same principle applies to your dog. You owe it to him and to yourself to have him vaccinated against rabies.

So, let's begin this discussion of a number of diseases with the facts about rabies, one of the most terrifying diseases known to man.

RABIES

“Mad Dog”!!!!

Mere mention of those words sends mothers rushing frantically to bring their children into the house out of danger's path — causes them to scurry to lock up their pets where they, too, will be out of harm's way — and finds them calling for help to run down the crazed animal.

A rabid dog running loose in a community and the consequent hysterical effect created is unnecessary. Rabies can be controlled and even eradicated. Some countries — England, Sweden, Denmark, etc., — have proved this can be done. The answer is simply:

Vaccination of your dog once a year against rabies,
Control of stray dogs that keep the disease alive,

and,

in Florida where rabid foxes are a problem, a trapping program to reduce the fox population.

Many cities and counties have and are conducting rabies control programs. The fact, however, that there were 332 cases of animal rabies and one case of human rabies reported in Florida last year is evidence that there should be expanded preventive programs. This is further demonstrated by the fact that 1,132 people received the Pasteur treatment in 1948. These 1,132 people all had been in contact with animals who had rabies or who were suspected of having it. The Pasteur treatment is a god-send — it is also a prolonged, annoying and sometimes expensive affair, and is not without danger in itself.

Any person who has lost a pet because of rabies or who has had to endure the Pasteur treatment to prevent rabies, will no doubt vouch for the necessity of a rabies control program.

Here are some facts you should remember about rabies:

Death is inevitable for both man and beast when rabies develops.

You do not have to be bitten by a rabid animal to contract the disease. If saliva from a rabid animal should enter a cut or scratch on your fingers, hands or face, you could be a victim of rabies.

Take Note:

If you should be bitten by an animal that you think is rabid — wash the wound with soap and water. Then go immediately to your physician.

Report the case to health authorities.

Do not kill the animal. He should be checked by a veterinarian and observed for ten days to see if he develops the disease. Many valuable pets have been destroyed unnecessarily. Hasty

destruction of animals has frequently hindered laboratory tests, making it impossible to decide whether or not rabies was present.

Although rabies is spread mainly by dogs, all warm-blooded mammals such as cats, foxes, cows, horses, goats, sheep, skunks, wolves, and squirrels are susceptible.

PROTECT YOURSELF AND YOUR DOG BY HAVING HIM VACCINATED ONCE A YEAR!

CREEPING ERUPTION (Larva Migrans)

A State Board of Health questionnaire sent to more than 1,000 physicians last October revealed that "creeping eruption" or larva migrans is far more prevalent than had been realized.

More than 500 physicians reported that they had treated a total of 7,781 cases of the disease in a six-month period.

This creeping eruption is an irritating skin disease of man caused by the hookworm larva in the feces of dogs and cats.



When the worm larva enters the skin, usually through the feet and hands, it causes intense itching. Within a few days, a small curved elevation may be seen, indicating the course taken by the worm. If not treated, it may become secondarily infected and lead to a serious illness.

This disease has long been a bane to gardeners, workmen, (especially plumbers and electricians whose duties take them under buildings) — babies who play in sand piles, and persons who go barefoot. It is known that a very high percentage of dogs in Florida are infected with hookworm.

Take Note:

Control measures for creeping eruption are: (1) the elimination of hookworm in pets, (2) keeping dogs and cats off the beaches, and (3) out of public parks where persons may be exposed to the parasites. (4) Sanitation in your own yards.

BANG'S DISEASE (Brucellosis)

The consumption of milk has reached an all-time-high in Florida today. Therefore, many diseases of cattle are of interest to man.

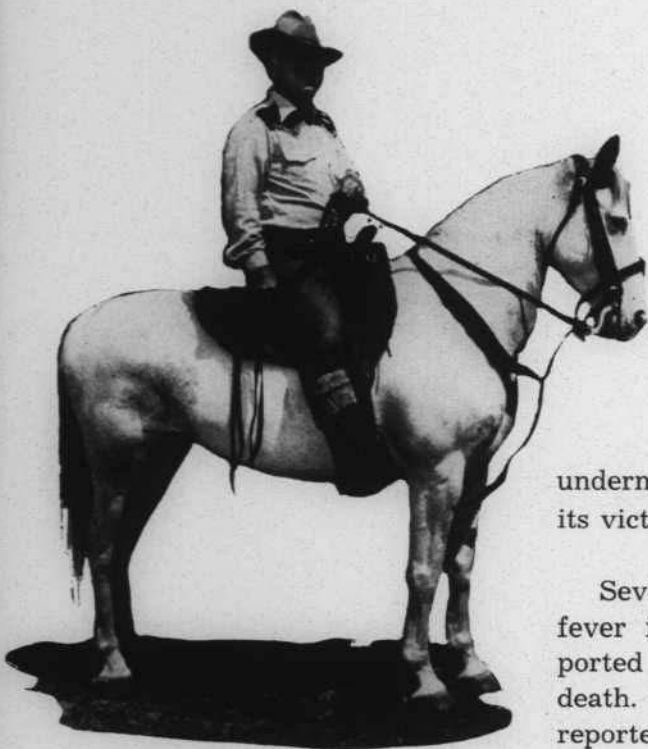
Both a medical and an economic problem in Florida is brucellosis or Bang's disease. It may be found in cattle, goats and swine. Brucellosis in human beings is commonly called undulant fever.

In animals, Bang's disease is a serious cause of sterility, abortion and low milk production. Abortion is the common symptom, but it is not the only one. Many animals are carriers of the germ of brucellosis with no outward sign of infection.

Undulant Fever may strike anyone who drinks raw milk from an infected animal. Farmers, veterinarians, packing house employees and butchers, may be endangered from direct contact with infected animals. Milk products such as ice cream, cheese and butter may also carry the germs of brucellosis unless properly pasteurized.



This shows the course taken by the dog hookworm (known as "creeping eruption") in the foot of a small child.



Undulant Fever is an insidious disease since people often have it for long periods of time without knowing what is wrong. Convalescence may take weeks, months or years. It undermines the general health of its victims.

Seventy-four cases of undulant fever in human beings were reported in 1948. There was one death. The number of cases being reported is increasing due to better methods of diagnosis.

Take Note:

You can protect yourself by:

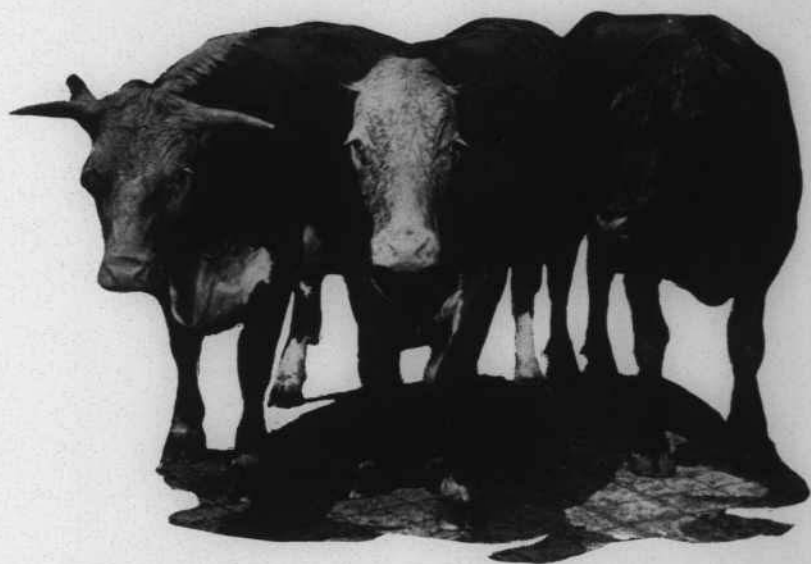
- Drinking only properly pasteurized milk, and testing the family milk cow when the milk is consumed raw.
- Eating only dairy products made from pasteurized milk.
- Keeping your hands away from your mouth, nose and eyes — good personal hygiene — when handling animals.

You can protect your animals by:

- Isolating cows, pigs, or goats that abort, from the rest of the herd and calling a veterinarian.
- Cooperating with your local and state veterinarian and Department of Agriculture in their programs of education and testing for the eradication of Bang's disease.

MASTITIS (Garget)

Ranking first in economic loss of dairy cows is mastitis. This is a very common infection of the udders of cows. It is character-



ized by ropey or stringy milk. The disease can produce septic sore throat, dysentery and other diseases in human beings who drink raw milk from an infected cow.

Mastitis is still found in all areas in Florida and remains an economic livestock problem as well as a public health problem.

Take Note:

State law excludes all infected cattle from milking herds.
Proper pasteurization of milk.

BOVINE AND SWINE TUBERCULOSIS

This disease may be transmitted to man by infected milk or by contact with an infected animal. The results of this can be seen in Tuberculosis of the bone, especially in children.

Take Note:

Testing of all dairy cattle for Tuberculosis annually.
Proper pasteurization of milk.

Remember: Milk is an almost perfect food — and also, a good media in which to grow germs. Improperly handled milk may become contaminated and cause other serious diseases. Diph-



Examination of milk by trained laboratory technicians is essential for your protection.

theria, scarlet fever, and typhoid germs may be spread from man to milk and back to man — **UNLESS** — milk and milk products are **PROPERLY PASTEURIZED**.

Thorough cooking of meat is a safeguard against beef, pork, tapeworm trichinea and salmonella (food poisoning). You are taking a big chance when you eat half-cooked meat.

EQUINE ENCEPHALITIS (Sleeping Sickness)

Horses are relatively unimportant sources of human infection compared with other animals. However, equine encephalitis (sleeping sickness) can be transmitted from an infected horse to man by mosquito or other insect bites.

Take Note:

Control of this disease is through the control of mosquitoes, flies and other biting insects — and by the vaccination of all horses and mules before hot weather brings with it an increase in the insect population.

TRICHINOSIS

Perhaps one of the simplest diseases to prevent which swine can transmit to us is trichinosis. This disease is surprisingly prevalent in Florida.

Trichinosis is a disease caused by eating pork which is infected with a small parasitic worm known as *Trichinella spiralis*. The worm goes through the intestines of man and travels to the muscles where it remains. It causes extreme discomfort and pain. It can cause death.

Prevention of trichinosis is the responsibility of two people — the farmer who grows the hogs for sale as meat — and Yourself, as the meat-eater.

Take Note:

Farmers who feed their hogs garbage collected from large institutions or cities should cook the garbage.

Since the consumer cannot be certain that this precaution has been taken, he must do his part. That consists of refusing to eat pork which has not been cooked thoroughly. Be sure that pork you eat has been cooked enough to lose its pink color.

ALSO OF INTEREST —

Leptosporosis — a disease of dogs and rats causing infectious jaundice or Weil's disease in human beings.

It is transmitted by contact with infected animals through skin or contaminated food.

It sweeps rapidly from dog to dog and dog to man — by direct contact.

It is prevalent in dogs in Florida today.

Take Note:

Eliminate fleas on dogs.

Conduct rat control programs. This will also pay dividends in reducing typhus fever, which is spread by infected fleas on rats.

Psittacosis (Parrot Fever) — Due to the climatic and geographic situation of Florida, this disease must be considered. Birds are raised in large numbers here for commercial reasons and as hobbies. There are definite regulations governing the state and interstate shipment of parrots, macaws, love birds, etc. Parrot fever may be transmitted directly to man by tropical birds. It is a serious and often fatal disease.

Tularemia (Rabbit Fever) — Primarily a disease of numerous small animals including rabbits and squirrels, tularemia is acquired by man by direct contact with sick animals. It is a debilitating disease.

The greater part of tularemia is spread by wild rabbits and hares. Hunters, housewives and vendors who skin and clean rabbits may acquire the disease from an unknown infected animal through some abrasion, or even through apparently unbroken skin.

Take Note:

Persons who skin wild animals should: 1) wear rubber gloves, 2) immediately wash blood from the skin with plenty of soap and water, and 3) follow with a disinfectant.

Meat inspection in Florida is done by federal, state, municipal or county officials. This varies with adequate (federal and state) to fair to none — from fairly well constructed and operated abattoirs to an oak tree in the woods. Meat inspection depends upon the local ordinance and degree of enforcement.

It is the goal of the State Board of Health to raise the level of inspection or slaughter of meat animals up to the level of federal and state regulations. This can only be made possible when the public demands it.

HOUSEWIVES SHOULD ASK —

to see the purple stamp of approval
on the meat they buy.

IT'S A GUARANTEE !



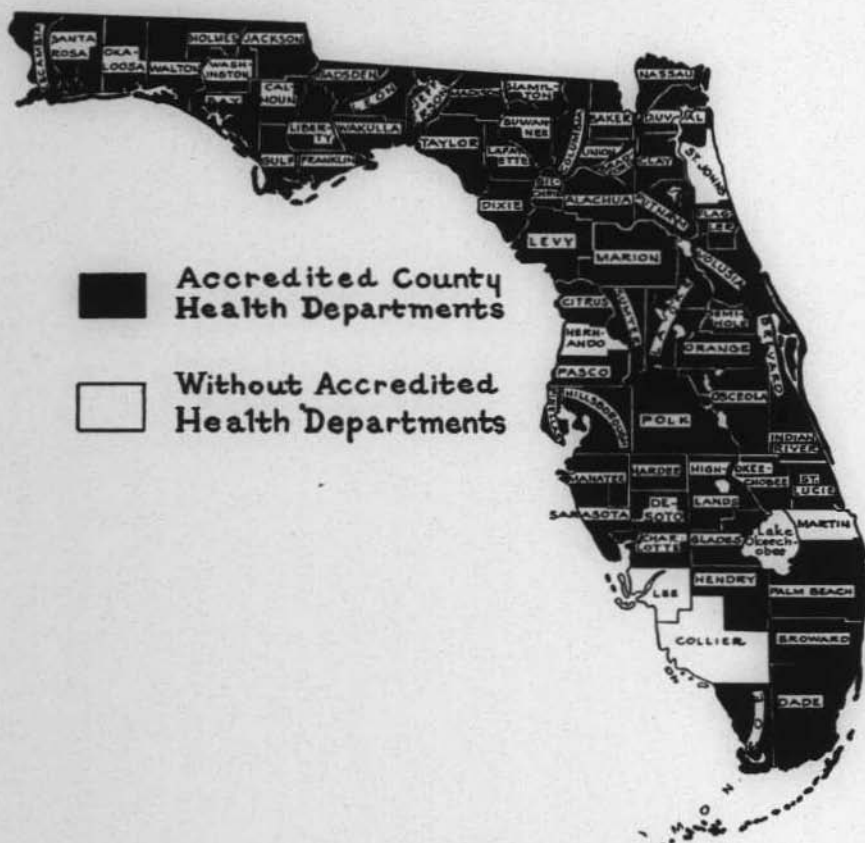
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"The Health of the people is really the foundation upon which
all their happiness and all their powers as a STATE depend."

—Disraeli (1877)

STATE OF FLORIDA



(In order to conserve funds, HEALTH NOTES will not be published during the months of August and September. Publication will be resumed with the October issue.)



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portrait of a Health Officer

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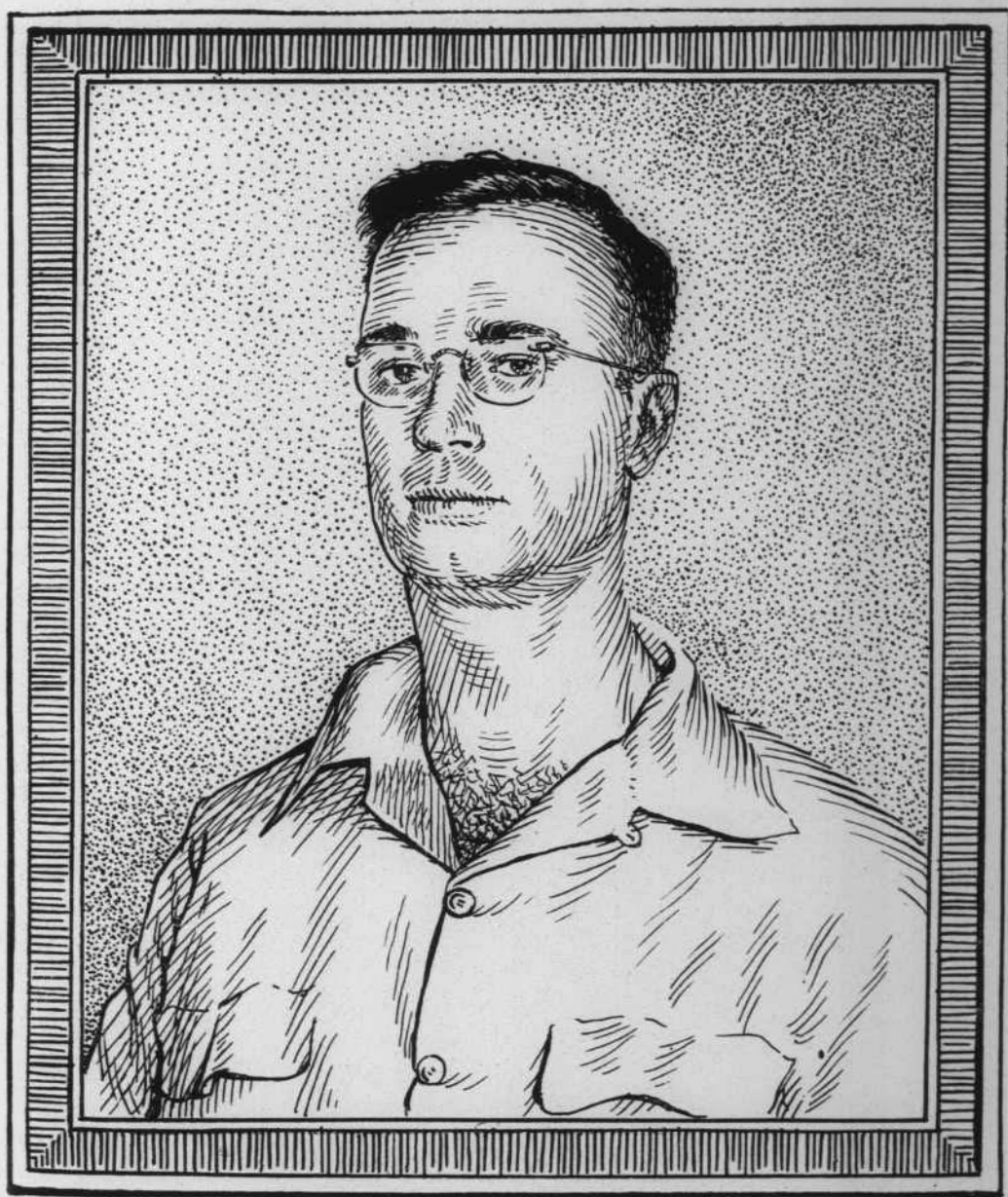
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portrait of a Health Officer

Florida **HEALTH NOTES**

WHAT IS A HEALTH OFFICER?

"Public health is the art and science of preventing disease, prolonging life and promoting physical and mental efficiency through organized community effort. . . ."

And who is the sparkplug of such a comprehensive program? The local health officer, who must be a jack of all trades and master of most.

He not only has to know medicine and keep up with the latest developments in his field, but he must know sanitation, water supplies, sewage disposal. He should be familiar with many phases of laboratory techniques in parasitology, bacteriology, serology.

It is of utmost importance that he have an idea of the historical and political background, as well as the disease history, of the area where he works.

Above all, a good health officer must like the people with whom he works and must have a real desire to help them. He must be able to deal with people from all walks of life. He should find his place in the community, no matter what its size or advantages, and be happy there.

If he is to spread the word about public health to his people, he must use all methods available. This means he should be a good public relations person, know how to work with newspapers, radio stations and community organizations.

Sounds like a pretty big order for one individual, doesn't it? But there are many such health officers in Florida and elsewhere in the nation.

To give you a better idea of the type physician you have here in Florida serving as your health officer, let's look in on one — Dr. Robert G. Head, Jr., director of the Jackson-Washington counties health departments.

IT ALL BEGAN . . .

It was purely by accident that Robert Head started his career in medicine. Until his college days, he had never entertained the

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ambition to become a man of medicine — although, he had always been interested in scientific subjects. As a student at the University of Tennessee, he was taking those courses which would prepare him for life as a chemist.

Fate took a hand one day in shaping Robert's future. Friends of his who were pre-med students at the University were on their way to take the American Medical Association's aptitude test for prospective medical students. They insisted that Robert come along.

Curiosity and lack of anything to do at the moment decided Robert. Again, fate, coupled with intellect and academic preparation had its whimsical way, for Robert not only passed the test but made the highest grade! That convinced him that medicine was the career for him. He couldn't make such a quick change however without some planning. One reason, he didn't have the money. This problem he solved by working his way through school. He sold papers, worked in an iron works, did a stint with the railway mail service, and also worked in the school library. The fact that the college was in his home town, Memphis, enabled him to cut down on expenses by living at home. His family, consisting of his parents and one sister, moved to Memphis from Hope, Arkansas, when Robert was two years old. He'll be 35 on his next birthday, November 2.

WE CONTINUE . . .

"Mr. Head" became **Dr. Head** in 1940. His next stop—internship at New Orleans Charity Hospital.

Shortly after entering the hospital he met and married Nell Langham, a student nurse. They have one son, Robert, III, who is seven.

The field of public health beckoned Dr. Head when he completed his internship so he accepted a position as county health officer with the Mississippi State Board of Health. He held that job until the army claimed him in 1943. As an air force flight surgeon, he served overseas in the Pacific area for 18 months. He was a major when discharged.

Upon his return to civilian life, Dr. Head entered private practice. Soon afterward he became seriously ill. During his period of convalescence, he made up his mind to go back into public health.



Without community help, the health program would fail. Here Dr. Head meets with the county agent, welfare supervisor, school principal, assistant county agent, soil conservation agent, home demonstration agent, general school supervisor and school lunch supervisor.

Florida's climate and good fishing holes helped lure the doctor here in January, 1948. Also aiding his decision was the fact that Florida's salary range for public health personnel is higher than the average for the United States — though not among the highest. He was accepted as director of the Jackson-Washington counties health departments. These two counties combined their health departments because they could not maintain a fulltime department alone. As health officer for the two, Dr. Head's total annual salary is in the neighborhood of \$7,000.

GETTING ACQUAINTED

Finding a place to live was the first task facing the health officer upon his arrival in Marianna, county seat of Jackson, where he was to make his headquarters. At the beginning he took the same house that his predecessor had occupied, until he could find a permanent residence. He shopped around and finally found what he wanted, a modern, roomy bungalow with "plenty of yard." This yard is Dr. Head's pride and joy and he gets a great deal of pleasure out of gardening. He raises roses and camellias and also has a vegetable garden. His fenced-in backyard is a

perfect place for his black cocker spaniel who recently became the mother of seven.

"Getting acquainted" is a very important step for any person entering a new community. But this wasn't difficult for Dr. Head. His affable, sincere manner soon met the approval of the friendly people of both counties. He is never too busy to stop and chat with folks on the street about anything from "Johnny's typhoid shots," to "where the fish are biting." Speaking of fishing, and this is one of Dr. Head's favorite subjects, he knows the best spots for black bass and on several weekends has caught the "limit." He'll tell you what he catches but when it comes to saying where, that's out—those fishing holes are a closely guarded secret!

Folks also remember Dr. Head after their first meeting with him, because of his speech defect, which has proven more of an asset than a liability. He stutters slightly, and has since he was two years old. But he has overcome the stuttering to such a degree that when he made his first radio appearance in Marianna, his audience was both surprised at and delighted with the smoothness of his presentation.

Radio talks are an important phase of Dr. Head's health education program



After the initial business of meeting people, Dr. Head and his family rapidly became a part of community life. He moved his letter to the Methodist church and now serves as a steward, while his wife moved her membership to the Baptist church. He also became a member of the Lions Club and the American Legion.

THIS IS WHERE WE LIVE . . .

Everything can't be perfect and run smoothly as Dr. Head found out when he first saw the health department in Marianna. The old school building, which houses headquarters for the health unit, gave him his first disappointment. Space on the second floor in what had been the school auditorium is occupied by the health department. The slanting floor gives you a peculiar feeling of walking up-hill when you enter the office. You'll probably notice next that the former beauty of the ornate ceiling is now marred by cracked plaster and gaping holes. The leaky roof doesn't help Dr. Head's feeling on rainy days. Facetiously, he says that he is nourishing a desire that the building fall in!



Interior view of headquarters in Marianna.

Some of the clinic buildings in the rural areas are just as bad if not worse than the main office. Some are log cabin-type buildings donated by various interested groups. Another, in Washington county, is a one-room frame building, lacking even a lavatory or a private room for examinations. A curtain partitions one end of the room for use as a clinic.

However, some of the clinic buildings are in good condition and it is hoped that before too long something will be done to improve the others. But until then, the people in those areas are only too happy to have health services to protest about the state of the buildings.

AND WHAT WE DO

Both Jackson and Washington counties are chiefly rural, with farming and cattle constituting the principal source of income. Jackson is much the larger of the two with a population of 37,000 as compared with 12,000 for Washington.



Entering one of the rural clinics.

Marianna, in Jackson county, is the largest town in the two counties. It is also an unusually interesting small town, for it has been the scene of many historical events. Like a number of other Southern villages, it was burned by Sherman's troops during the Civil War, but slowly regained its former look. Now, the tree-lined square dividing "Main Street," the plantations bordering the town and the pleasant, easy air of the place is reminiscent of the ante bellum period. But — the quiet air of the town belies the personalities of its citizens, for they are very community-minded and active in all things that will improve their city.

Going over to Chipley, county seat of Washington, you'll find a much smaller place than Marianna, but life there follows the same pattern. You'd probably never forget Chipley, either, if you visited there on a Thursday afternoon. That's the time when practically everyone closes up and goes fishing. It's not at all unusual to see the roads in that area lined with boat and fish-pole-laden cars as the townspeople hurry to their favorite spot.



Another rural clinic.

THERE ARE ALWAYS PROBLEMS

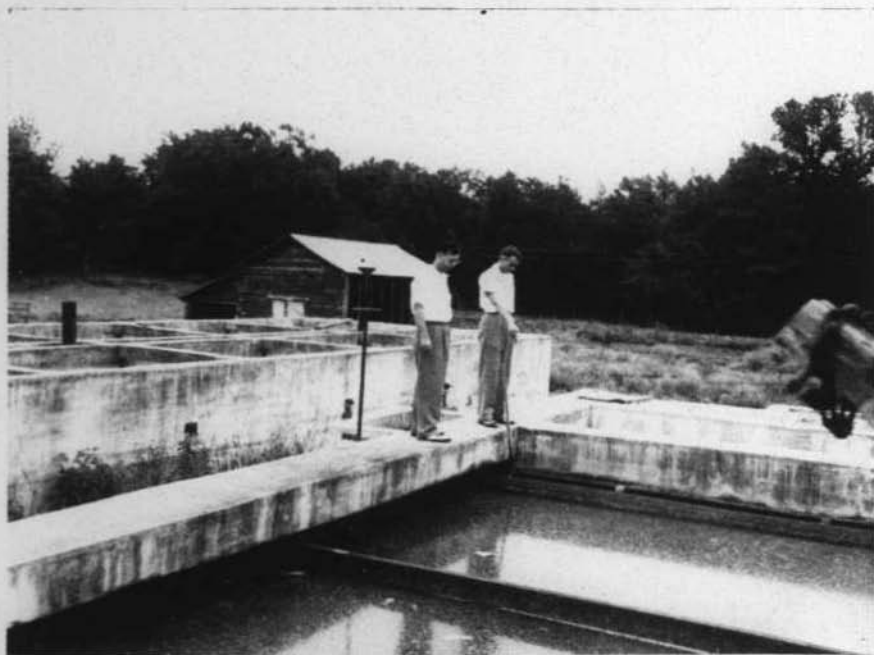
Both communities have similar health problems and both need more adequate facilities and personnel for handling their problems. Dr. Head has never found the hard-pressed local doctors too busy to lend their support to bettering the health of the people, and they are always cooperative in any program sponsored by the health department.

As is the case in many rural areas in Florida, hookworm and nutrition are major health problems, for sanitation is extremely poor, contributing to the high hookworm incidence. Many factors aid and abet the problem of nutrition.

A glance at the records of a hookworm survey conducted in two schools will give you an idea of the seriousness of that problem. Tests run in one school revealed that 70 per cent of the children were infected—80 per cent were in the other school.



Talking over the hookworm control program with members of the Junior and Senior Woman's Clubs, sponsors of the program, and the school supervisor.

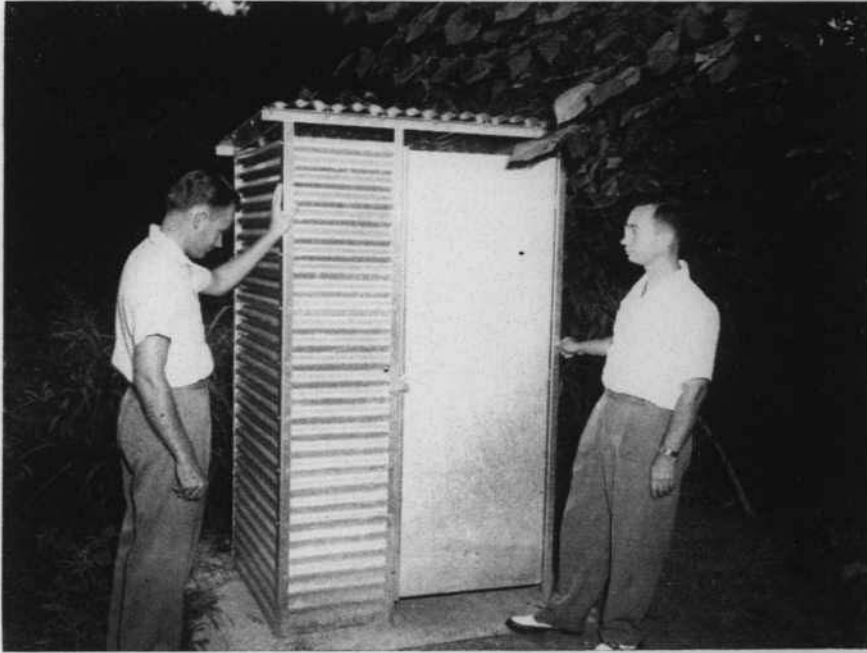


Making an inspection of the sewage disposal plant.

The infant and maternal death rates are high, but this is true in all sections of the State. When you stop and consider that many people in rural areas are too far from medical facilities — that there aren't enough doctors — forcing the people to depend on midwives (a great many of whom have no training) to deliver their babies — you can well understand why these rates are high.

From 50 to 75 per cent of the children in the two counties need dental care.

One of Dr. Head's biggest jobs is in the field of communicable disease control. For it is to the health department that many people turn for help and advice with this problem. One of the basic functions of a health department is to prevent the spread of communicable diseases. Private physicians ask for help in diagnosing possible cases; anxious parents seek advice about how to protect their children; school officials want to know about how to cope with a small epidemic. This is one reason why immunization programs are so essential and popular; and why health education must be a health officer's constant concern. It is why



A "newer" type of sewage disposal for rural areas.

we protect our milk and water supplies so zealously and are so concerned with the disposal of human wastes in sewage.

These are just a few of the problems with which the people, aided by the health department, must cope.

How are they meeting these situations?

First of all, to combat any problem which directly or indirectly affects everyone in the community it is obvious that there must be a united effort by all concerned. The home, church, school, health and welfare departments, civic groups—all must pitch in and help. Health problems cannot be corrected by the health department alone, as Dr. Head will readily tell you. He realizes full well that without the interest and aid of the people in Jackson and Washington counties, his efforts would be futile.

Take hookworm control for example. One of the first things to be done in controlling this disease is to improve sanitary facilities. With only one sanitary officer for each county, the health department can do little, alone. That is why Dr. Head is justly

proud of the fact that he has a hard-working lay group interested in this particular condition. The group he refers to is the Junior and Senior Woman's Clubs of Marianna.

"With women like that on your side, you can fight anything," says Dr. Head.

These women are now engaged in making a survey of the sanitary facilities in Jackson county. Where they find a lack of such facilities, they contact the home owner in an effort to persuade him to either install sanitary toilets or septic tanks, or to connect with a sewer line.

They are not the only ones who are promoting better health in Jackson county. There is the Lions Club and its sight conservation program whereby needy children have their eyes examined and are fitted with glasses, if necessary. Many such children are referred to them by the health department. The Kiwanis club sponsors, through the health department and in cooperation with the local physicians and the community hospital, a program to



School students break the ground for a vegetable garden. Interested by-standers are Dr. Head and school principal.

remove diseased tonsils and adenoids for those who cannot afford such care.

Crippled children who need attention may attend the crippled children's clinic conducted twice a year by the Florida Crippled Children's Commission and sponsored by the American Legion and its auxiliary.

It has already been pointed out that a large number of children need dental care. That is why the Pilot Club is even now laying the groundwork for a dental clinic to which indigent children may come for help. The staffs of both health departments have for sometime carried on a program to educate the people about the necessity of seeking private dental care.

An active Tuberculosis and Health Association works hand in glove with the health department in trying to eradicate tuberculosis. Two health councils, a white and a negro, although still in their infancy, are making their efforts for better health felt in all corners of the county.



Results of vegetable garden are canned by mothers under supervision of school lunch supervisor. Food is used for school lunch program.

Since the organization of the two groups, the members have, for example, been "beating the bushes" to get more sanitary privies in the rural area. In a trip around the county, you will see any number of new privies — testifying to the success of their work.

The councils also hold regular meetings, at which time, they not only map out their plans for future action, but by having speakers, such as Dr. Head, they are further educating themselves about their own health conditions.

"Excellent" is the way Dr. Head describes the cooperation he receives from school personnel. He and the general school supervisor, Jack Stevens, whose office is just below the doctor's, have "beaten a path" to each other's door as they plot ways and means of helping the school children.

One program conducted jointly by the health and school departments and of which both groups are tremendously proud, was to improve the general health of students in two demonstration schools. When first examined, nearly 75 per cent of the children



A good start in life means everything.

were anemic, many had hookworms, and a majority were not eating the proper food. All children whose parents could afford private medical care were referred to their own physicians. Indigent children received vitamins daily, were treated for hookworm and some of the mothers working with the school lunch room personnel, canned vegetables, grown by the children themselves, for their lunches, which when supplemented by foodstuffs from the federal school lunch project, gave the children an adequate diet. Thus, this was a cooperative venture in which parents, physicians, the health department and school officials participated.

Seeing these children now, you'd never believe that they had ever been anything but healthy.

OUR GRATEFUL THANKS

For the work done by all of the folks in his "baliwick," Dr. Head sends up many prayers of thanks. He knows he is not responsible for all the good that is being accomplished — for he and



"Let's take a look at you first, young fellow," says Dr. Head, as other "patients" await their turn to see the doctor.

his staff are merely the catalytic agents for organizing the efforts of the people, analyzing their health needs and seeing that such efforts are expended in the right direction.

GOOD NEWS . . . AND BAD

There are many bright spots in the health picture in both counties. For instance, Dr. Head is grateful that there has been no typhoid in his area for a long period of time. In order to insure such a condition, last year the nurses in Jackson county (and there are three) immunized more than 9,000 persons against the disease.

A typhus control program was recently completed. This work was started after a survey showed that 58.1 per cent of the rats tested were positive for typhus. This disease can be transmitted from rats to man by infected fleas; thus the necessity of a rat control program. The city council of Marianna swung its weight behind a DDT dusting project to control the disease and it has paid many dividends in the greatly reduced incidence of typhus.



Mother watches examination of daughter with interest.

Now the county has a continuous DDT dusting and spray program paid for by each householder desiring the service. This has been very successful in reducing the insect population.

Encouraging is the fact that only one case of diphtheria has been reported in Jackson county this year.

There has been a recent outbreak of malaria because of the high water in the vicinity but Dr. Head has hopes that the spraying program will control this.

Venereal diseases and tuberculosis rates rank about the same as in the rest of the State. They are both problems. Both counties need VD investigators if they are to expand their venereal disease control programs.

As this is written, Dr. Head has a headache brought on by trouble in the water supply for Marianna. The water is muddy and the regional engineer for the State Board of Health advised that all drinking water be boiled until the situation can be corrected. You can well imagine the number of calls the health department receives from citizens wanting to know what's wrong with the water, and, it's Dr. Head's job to calm jittery nerves by explaining the trouble.

THEN THERE'S THE QUESTION OF MONEY

The subject of finances is probably Dr. Head's principal source of worry. He readily admits that he is no mathematician, particularly when the time comes to figuring out a budget for the health department. But he manages to do a workmanlike job in budgeting the funds despite his dislike of adding and subtracting. In his financial set-up, he feels that it's mostly a matter of subtracting, for Jackson county appropriates less per capita for public health than any other county in the State. He thinks it rather ironic that Jackson's appropriation is 20 cents per capita while the neighboring county of Liberty appropriates \$1.50, which is the highest in the State. Dr. Head points out that the Jackson county health department which was organized in 1934, has not had an increased appropriation in ten years.

It isn't that the people and their county commission are not "sold on public health" — for they are. It is simply because there is not enough money to give all agencies what they actually need unless some new funds are procured. The present funds must be spread rather thinly to go around.

AN EVERYDAY SAMPLE

Getting away from money matters, let's follow the health officer for a day and see the diversity of his work.

At 8 a.m. he arrives at the Marianna office to find a crowd already collected. The room is full of persons wanting blood tests; food handlers are there to secure their health cards; indigent maternity patients (prenatals) are waiting for examinations. Sprinkled through the crowd are school children, pre-school and infants waiting for a check-up or for immunizations.

Dr. Head is interrupted several times by telephone calls from people wanting to know about the water supply, polio and other



Never too busy to stop for a moment and answer a question or so.

health problems. He manages to clear the room by noon and now it's time for lunch.

At 1:30 he attends a conference with newspapers and water company officials about the water supply, then it's back to the office at 2:30 where he works at his desk for awhile. He is interrupted several times by visitors: a home demonstration agent; a man wanting to know more about possible rabies in his cattle; a teacher asking advice about a health program for her school. At 4 o'clock he departs for home but his leisure is short-lived for at 6:30 he is off to a Lions club meeting. Then at 7:30 he has to dash to a Tuberculosis and Health Association meeting. Dr. Head attends from one to four night meetings a week, either as a speaker or as an interested participant.

It is plain to see that public health is no place for a lazy man!

"DOWN THE ROAD A WAYS"

Making the "rounds" with the doctor would not be complete without a trip to the rural clinics which are held in the smaller outlying communities.

Any and all modes of travel are used to get in to the clinics.



Complaints ranging from a split toenail to a condition requiring plastic surgery are seen in these clinics, for some folks haven't as yet realized that the public health clinic is not a place to go for treatment — that it is there to prevent people from getting sick.

Dr. Head knows that many of these sick persons would never see a private physician, even if he recommended that they do so. There isn't a physician in many of these smaller communities for the people to go to anyway. So his policy is to treat only minor emergency conditions and refer more serious cases to the nearest physician. Welfare cases that are worthy and in need of help, he aids by referring to the proper agency, and by following up the case when possible to see that the person has received help.

He is patient with his people and always has a willing ear to listen to their troubles. The gentleness of his manner has endeared him to his "patients" and leaves little room for improvement. Crying babies soon hush when he touches them, and many of his "small fry" visitors vie to see who will be the bravest when doctor sticks them with the needle, for "doctor" always has a smile, a word and a pat for the youngsters.

That the people know about and are all for the work being done in these clinics is evidenced by the various modes of travel they use to get there. People arrive by horse and wagon, in broken-down trucks, cars, public buses and on foot. Some walk miles to see the "health doctor."

THE FUTURE

Dr. Head likes public health. He likes the place where he works. He feels that he has his "roots down" and is contributing something worthwhile to the community. He enjoys working with his staff — the public health nurses, the sanitarians, and the clerks.

He does not foresee immediate improvement in many of the health problems, for he realizes that it takes a number of years to make progress in public health. Actually, he feels that he is



The pump house of the sewage disposal plant is given a "going over."

merely scratching on the surface at present. But he'll keep plugging away at interpreting health needs to his people and depend on his Saturday afternoon fishing trips as his prescription for curing days of discouragement.

Some time in the not too distant future Dr. Head would like to go away and study for his master's degree in public health.

However, he hopes to work where he is as long as there is enough money to do something constructive in the way of public health work. Of course, he would like to branch out and offer more services to the people, and maybe some day . . . who knows? Good luck, Dr. Head.

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**That LOCAL HEALTH
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Employ**

65 Health Officers

252 Nurses

155 Sanitary Engineers and Sanitarians

160 Clerks and Stenographers

(This is exclusive of Central Office Personnel)



Florida **HEALTH NOTES**

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TEST TUBES BY THE MILLION

The State Board of Health

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Florida **HEALTH NOTES**

FOREWORD

In the early years of public health, our medical forefathers listed four basic functions of a state health department. Activities have expanded and responsibilities grown beyond all anticipation, but the basic services are still of outstanding importance. One of these is the provision of public health laboratory service.

Frequently we are asked by interested individuals, particularly students, if they may visit the laboratory. "Certainly, but how much time do you have?" Again and again, one must point out that it takes time to see and understand the varied activities of a public health laboratory. When time is limited, attention must be limited to illustrative activities.

In the same spirit we invite you, the reader of **HEALTH NOTES**, to see some of the activities of your **PUBLIC HEALTH LABORATORY**. We shall begin with the patient or community to be served. The specimens will be followed to the laboratory. Several different methods of testing will be observed. Lastly we shall see how the laboratory findings are used.

Albert V. Hardy, M.D., Dr. P. H.

Director, Bureau of Laboratories

Germ Detectives

Mrs. Donna James had her hands full — with three small children, a husband and home to care for. Also, recently she had been annoyed by a persistent cough which seemed to have followed an attack of "flu." She had been too busy to pay much attention to it but when she saw the notices of the x-ray survey she decided she would stop by when a unit was in her neighborhood. Mrs. James was one of the 22,000 examined by x-ray during the campaign in her city.

The first report was not reassuring. There was an abnormal shadow in the picture of her lungs. A large x-ray film was needed. She was requested to report to the recheck x-ray station two days later. The suspicion aroused by the first x-ray was confirmed. There were the feathery shadows of early tuberculosis.

Two days later a blue-uniformed public health nurse called on Mrs. James. The findings by x-ray were being reported to her physician, whom she should see without delay. Also, she explained that a further test was needed. Specimens of sputum must be examined to see if they contained the germs of tuberculosis.

Miss Carter was specific in her instructions. The material for examination must be coughed up. The best time to collect the specimen was in the morning. "Fill the little bottle just one-third full — and be careful. Laboratory workers must handle the specimen bottle, so be sure no sputum gets on the outside of the bottle. One specimen would not be enough — one each day for three days was desired." It was agreed that Mr. James would bring the specimens to the health department on his way to work.

Each container left by the nurse was used as directed and the specimens arrived at the laboratory, one each on Tuesday, Wednesday and Thursday.

Miss Carter scarcely thinks of herself as a bacteriologist, but in securing reliable laboratory findings, she is as important as any laboratory worker. "No test can be better than the specimen sub-

mitted for examination." If through hasty and inadequate instruction, Mrs. James merely provided saliva, or phlegm from the back of the throat, no laboratory test could indicate whether tubercle bacilli were being given off from the lung. The careful cooperation of physician, nurse and patient are all required to assure reliability in laboratory findings.

The specimens received, the laboratory workers take over. They are, first, "Miss Jeff," the senior bacteriologist, immediately responsible for the T.B. tests. She has a healthy understanding of the risks in handling these specimens and is fully aware of the importance of these tests. "Lee," a technician, devotes full time to this work. He has the build and energy of a football linesman. He knows tuberculosis by personal experience. It was detected late in his junior year in college, so he spent months in a sanato-



Every precaution is taken to protect laboratory workers when dealing with tuberculosis germs.

rium. He does not have his bachelor's degree in bacteriology, but does have a degree of immunity to tuberculosis. He has an assistant, Ethel. They do the tiring labor of opening mailing containers, numbering specimens and data slips and preparing the specimens of sputum for examinations. In a different part of the laboratory, Dennis, a colored college graduate, is responsible for preparing culture medium for the growth of tubercle bacilli. Lastly, dependable colored women clean and sterilize glassware and prepare specimen containers for distribution. This is the team—but now let us return to the samples Mrs. James submitted for examination.

Each morning about one hundred specimens are received to be examined for tuberculosis. On an average, ten of these will contain the disease producing tubercle bacilli. There is danger in handling such material—but a danger which can be avoided through knowledge and care. First, the specimens are prepared in an isolated laboratory equipped for this work only. Lee and Ethel, at work here, dress as would a surgeon in an operating room, with gown, mask and rubber gloves. On completing work, this outer dress is sterilized.

The day's specimens are opened, numbered, and made ready for examination. The first step is "digestion"—the tenacious mucus and pus must be transformed to a watery fluid. The chemical used for this purpose is harmless to the tubercle bacilli, but it does destroy many of the less resistant bacteria. The specimen with the digesting fluids added is then put in an incubator overnight.

On completion of the digestion, the tubercle bacilli, if present in the sputum, are concentrated. This is done by a centrifuge. The bottles are driven at about 3 miles per minute in a circle less than two feet in diameter. During this 30 minute and 90 mile ride, the high pressure maintained forces the heavier bacteria (including the tubercle bacilli) to the bottom. The fluid at the top with few or no tubercle bacilli, is poured off; the sediment is retained for examination.

The next step marks the beginning of two separate and entirely different types of examination. The simpler and more rapid, though less reliable, is a microscopic examination to detect the presence of tubercle bacilli. From the sediment, smears are prepared on glass slides. These are allowed to dry and are then briefly heated. The latter aids in making the smear adhere to the slide and also kills, but does not change the appearance of the bacteria. The other test which is started at the same time is the culture. The medium is "seeded" by transferring sediment to the culture medium and spreading it over its surface. The culture is stoppered securely. The slides and cultures are taken to the general laboratory for examination.



Germ's must eat too. Here powdered food is being carefully weighed before being added to water; then it becomes culture medium.

Tubercle bacilli are minute colorless organisms with a resistant waxy covering. Staining procedures have been devised to make it easy to find and identify these organisms. A red stain is used first — of such a nature that it penetrates the waxy coating and stains the tubercle bacilli a deep red. But other organisms and material are similarly stained also. So the red stain is removed from all but the tubercle bacilli. The latter alone holds its stain even when decolorized by acid-alcohol. In the language of the bacteriologist, the tubercle bacilli are "acid-fast." Lastly a blue dye is used — which stains all but the tubercle bacilli. The end result, is that the background, cells and most bacteria in the smear are bluish — the tubercle bacilli is a contrasting red.

The staining completed, the bacteriologist examines the slides under a microscope and identifies organisms believed to be tubercle bacilli. Here both judgment and experience are needed since a laboratory diagnosis of high significance must be made on the basis of the appearance of the organism. In cases of doubt the slide is reviewed by the senior bacteriologist. The report of findings on the slides is made about 36 hours after the specimens arrive at the laboratory. The first on Mrs. James was negative, the second was negative, but T.B. organisms were found in the third specimen.

The examination to determine whether tubercle bacilli may be grown (the bacteriologist would say "cultured") is more reliable. This begins by preparing proper food (or medium) for the organisms. An acceptable diet for T.B. germs is yolk of eggs, potato flour, milk, minerals, vitamins and glycerine. In addition dye is added which makes the food edible for T.B. organisms only.

Tuberculosis in the individual develops slowly; the organisms in this artificial environment also grow slowly. It requires commonly four weeks for growth to become visible on the culture medium — and at times as long as eight. Tubercle bacilli when

they grow look much like a dry bread crumb — but that crumb-like appearance contains billions of disease-producing germs. One month after Mrs. James sent in her specimens the health department received the report that the first — as well as the third specimen — was positive for tuberculosis by culture.

The scene shifts and again Miss Carter is visiting Mrs. James, temporarily in bed at home and carefully isolated from the children. To hear them one would think that the findings were something about which to be happy. Mrs. James was really fortunate to have had the x-ray when she did. One usually recovers in a relatively short time when the disease is found early. And the first positive laboratory report meant that the children and Mr. James had been protected almost from the very beginning. Now with two positive cultures it was evident that a period in the sanatorium was certainly needed. It might not be too long since probably she could return home as soon as repeated laboratory tests showed that she was no longer coughing up tubercle bacilli — and no longer a hazard to her family and others. Fortunately, Grandmother could stay with the children.

So the work of Miss Jeff, Lee, Dennis, and others in the laboratory had a major part in determining the cause of Mrs. James' illness — in protecting her children, in indicating the need for sanatorium care. Later it will aid in revealing the earliest date that she may safely return to her home and children.

This is the story of but three specimens of the twenty thousand examined for tuberculosis in one year by the State Board of Health Laboratories!

Is the Water Safe for Drinking Purposes?

The telephone rings. "Hugh, this is Sid. Recheck water samples from Grass City are being sent in. They'll be on the 2:30 bus."

"O.K. We'll have them picked up."

"Give me a ring if these samples are as bad as the regular monthly ones you examined last week?"

"Sure will. Has something gone wrong?"

"We don't know, but if these samples are bad, someone will have to go immediately to investigate."

Thus ended a conversation between a sanitary engineer and a bacteriologist at the State Board of Health.

The samples arrived on schedule. Six had been taken from various locations on the city water supply. They were iced — insuring that the laboratory would receive water unchanged from the time it was drawn from the well. Each specimen was taken in the special sterile sample bottle holding about one glass. The paper guards covering the large ground glass stopper were in place. The specimens had been taken by a sanitarian who understood and followed the technic for collecting reliable samples.

"Standard Procedures" were employed to determine whether the water of Grass City was satisfactory or unsatisfactory for drinking purposes. Throughout a period of several years a group of bacteriologists and sanitary engineers representing health agencies in the United States and Canada have developed, improved and standardized water testing technics. The latest manual, stating procedures, is found in every public health laboratory — and methods are followed "to the letter." The initial step is simple. Using sterile pipettes an exact amount of water is measured into each of five culture tubes. These contain a liquid culture medium and a small inverted tube. The latter is to trap gas which may be formed by the growth of bacteria. The

first objective in testing water is to determine whether it contains "gas forming" bacteria. If present, this means that the water may have been polluted with human, animal or bird feces.

The purpose of testing water is to prevent the spread of disease by water. The only diseases which are spread in this way are those in which the harmful germs are discharged as body wastes to sewers, cesspools and privies. To test directly for disease-producing germs in the thousands of gallons of water used daily would be impracticable. But there is this simple and reliable test which reveals whether it has been "polluted"—if so, it may contain disease-producing germs, and is certainly not a fluid to be consumed with any relish — or safety.

The rack with the 30 tubes used in testing the six samples from Grass City were observed the following morning. Already 24 of the tubes had "gas." Next day the remaining 6 had the same findings. There followed additional tests to determine whether these "gas formers" were the germs (*E. coli*) which normally live in the intestine. They were. Another 48 hours for growth was required for this test. From the time these specimens arrived at the laboratory until the earliest time that the final report could be made was four days.

Drinking water is considered unsafe if by these tests it is found to contain any "*E. coli*" germs. The larger the number, the greater the hazard. Hence, subsequent tests on water from Grass City were examined to find out approximately how many were present. In this test a portion of the sample is diluted in sterile water, so one part of the water to be tested is contained in ten, one hundred, one thousand, ten thousand and one hundred thousand parts respectively. Each of these dilutions is examined, using 3 rather than 5 tubes per dilution. Each tube showing the presence of "gas formers" is tested further. Finally, the laboratory is able to give the important information as to how heavily the water is polluted. That from Grass City was very bad.

Visiting the City concerned, one found that the laboratory findings on the city water were a matter of high interest and concern. For years, the water had been tested regularly each month but heretofore samples had been satisfactory. Now with one bad sample, there was an immediate retest. On receipt of this report the public was warned against drinking city water unless boiled.



It takes lots of equipment and many tubes to find out if drinking water is safe.

The Council had a special meeting, the Superintendent of the water plant, the County Health Officer, and a Board of Health engineer were on hand. The laboratory tests were reviewed and reconsidered. The well which previously had yielded satisfactory water now provided water with more than a million "E. coli" per glass. What could be done?

"Let's not make any hasty decisions," was the engineer's conservative advice. "Send samples to the State Laboratory twice weekly for the next four weeks."

The laboratory received specimens as advised, and reported the findings. One month later the City Council and many concerned citizens were again on hand for a special meeting. The laboratory evidence was considered again. There was some fluctuation in the "E. Coli" counts but no real tendency to decline. The well was "condemned." A new one in an entirely different area was to be drilled. The cost would be high but Grass City knew that a safe

and adequate water supply was essential to the health of its citizens.

Here is public health in action. The sanitary defect was found through the regular monthly laboratory tests **before**, not after, an epidemic. Precautionary measures were established immediately. The situation was studied carefully by experts. It was found necessary to discontinue the use of the old well and to drill a new one. In these events a major responsibility in determining action taken rested on the division of sanitary bacteriology in the public health laboratory.

For those quiet behind-the-scenes workers, a little applause, please, for an important job well done!

An Hour at Court

It was an unusual place for a laboratory worker — a witness at Court. The case on the docket was serious: possessing and selling marihuana cigarettes. The evidence was clear, to a point. Cigarettes were found in the possession of the prisoner — likewise a supply of leaf believed to be marihuana. The supply seized was offered as evidence in Court. It was proven that the prisoner had sold cigarettes. On three occasions these had been purchased by a law enforcement official posing as a smoker. The cigarettes purchased and the marked bills were offered as evidence. But did the cigarettes actually contain marihuana as was contended by the prosecuting attorney?

The next witness — the chemist, Bureau of Laboratories, State Board of Health. His credentials as an expert were readily accepted since for several years he had been called in on such cases. Did he receive these cigarettes directly from the police officer?

Did he himself perform the examinations? What types of tests were used? And what was found on microscopic examination? On chemical examination? "In your opinion, did the cigarettes contain marihuana leaves and did they have the narcotic found in such leaves?" Largely on the basis of the chemist's evidence, the prisoner was found guilty and sentenced to three years in the State penitentiary.

A heavy responsibility for an individual, yes, but one which was borne with ease. The chemist spoke with the assurance of ample knowledge. The leaves could not be anything else. The chemical from the cigarettes gave the typical reaction of the narcotic in marihuana leaves. In giving testimony, there was one thought only — presenting the truth — fully, clearly and simply. Scientific facts, not the chemist, convicted the prisoner.

Blood Tests

It was one of the 1,200 blood tests which came to the Jacksonville laboratory in one day. The specimen was from Stella Ray, a colored woman now three month's pregnant. This was Stella's second pregnancy. She lost the first baby before it was fully developed. This time she decided to see a doctor before it was too late. She answered his questions, though she didn't quite see why all were asked. The band they wrapped around her arm gave a tight tingly sensation, but it meant nothing more to her. The measurements seemed funny, but they didn't hurt. But she was glad of one thing: the doctor took a blood test. She had heard that some people had "bad blood" and took shots. She wanted to know whether her blood was "good" or "bad." (One wishes that Stella knew that what she thought of as "bad blood" was the venereal disease, syphilis).

There are many steps in performing the blood tests which aid in the diagnosis of syphilis. Each requires the utmost in care. Some procedures are simple, others highly technical. A large serological laboratory is organized on a "production line" basis,



These women are preparing mailing containers so that specimens may be sent direct to the laboratory.

each worker performing those steps in which he is particularly skilled and trained. All work is done under the watchful eye of "Miss Carolyn," one of the country's best serologists.

Work begins with receipt of specimens in the mail. The specimens are opened one by one. Immediately the sample is given its serial number which is stamped on the data slip by mechanical numbering machines; the identical number is attached to the tube by tape. That number remains with the specimen throughout its test.

As racks are filled with specimens, the next step in preparation begins. Blood is made up of about equal parts of a fluid portion — serum — and a clot which contains the cellular elements. Serum only is used in the test. So the clots must be removed from each sample and the remaining fluid centrifuged. The clear serum is poured to a new tube, the numbers being transferred one by one as this is done. Next, the serum must be heated to an exact temperature for an exact period of time. Now, the serum is ready for testing.

The blood test for syphilis is best understood through some knowledge of its history. Serological blood tests are designed to detect specific changes in the blood caused by specific diseases. One of the earliest blood tests was devised for typhoid fever. An individual recovered from this disease has new chemical elements in the blood which react with the germs which cause typhoid. Normally these germs swim freely and move independently. On recovering from typhoid—or after taking the typhoid shots—the blood serum contains a substance which causes the typhoid germs to stop swimming and to clump together in larger and larger masses. To test to see if a patient may have typhoid, one mixes the patient's serum with typhoid organisms. If large clumps form, one knows with a high degree of certainty that the individual has or has had typhoid—or has recently been vaccinated against it. The typhoid organisms are easily grown and this test has been accepted for more than 50 years as a highly useful diagnostic test for this infection.

There is a similar test for typhus fever. This disease is caused by minute "germs" which only recently have been grown outside of the body, and with great difficulty. Still a useful and reliable



Trained and experienced technicians are here testing blood samples.

blood test has been available for many years. It was found that certain readily growing germs which produce no disease, could be used in the test. Chemically, these and the germs which really cause the disease are so similar that the easily growing ones can be used in the test to indicate whether the individual has typhus fever.

The organisms which produce syphilis even today cannot be grown on culture medium. They are present only in diseased tissue — and are particularly numerous in vital organs such as the heart and brain. Early workers developed blood tests using (so they thought) the germs in a diseased heart. It worked. But later it was found that an extract from a normal animal heart was just as effective. So today the blood test for syphilis is a chemical procedure — using no disease-producing organisms at all. Presumably the chemical substances extracted from the heart muscle, is very similar to that in the disease-producing germs.

The test ordinarily performed involves mixing appropriate proportions of serum with the carefully prepared test solution. (The preparation of the latter from beef heart is a very complex chemical procedure). These two substances are shaken for exact periods of time in mechanical shakers. The tests are read — though sometimes only after the addition of salt solution. Some tests are performed on slides and observed under the microscope, others are done in test tubes and are read with little or no magnification. The nature of a positive reaction is similar to the test described for typhoid. The fluid in a negative test remains evenly cloudy — in a positive reaction, the minute globules of the test chemical come together in easily visible clumps, leaving a surrounding clear fluid.

Let us return to the blood test of Stella Ray. Her specimen was prepared for examination in the usual way. To assure high accuracy, a microscopic and a tube test were both performed, as is done on all specimens. Both her tests had the characteristic clumping of the strongly positive reactions. The test was positive for syphilis — but how positive? This is regularly measured in such

specimens. The serum is diluted: equal parts of serum and saline (salt solution), one-quarter serum and three-quarters saline, one-eighth serum and seven-eighths saline and so on upward. Each dilution is tested and compared with findings on undiluted serum. Some bloods giving positive tests react only in the latter — some continue to be positive if there is only 1 part of serum mixed in over one hundred parts of saline. Stella's test was positive in one of the high dilutions. This is strong laboratory evidence that Stella was infected with syphilis.

The test is completed but the work in the laboratory is not. There are the hundreds of pieces of laboratory glassware to be washed. These are sent to the basement by the little home-made elevator. Mechanical washers efficiently handle tubes and pipettes. No sooner have the tests of one day been completed before one must prepare for the specimens which will be there in the next morning's mail.

The clerical staff prepare and handle the outgoing reports, and retain, in case of loss, an exact duplicate of each report sent out. Within 24 hours of the arrival of Stella's blood specimen the report was on its way to her physician.

The findings were in line with the suspicions of Stella's doctor, but in accordance with his usual and excellent practice, a repeat sample was sent from Stella. Her husband also came in for a blood test as he was asked to do. Both tests came back strongly positive — and both patients were referred to the Rapid Treatment Center in Melbourne, where they stayed ten days taking intensive treatment. That was six months ago. They have gone regularly to their doctor for repeated blood tests. Stella's pregnancy ended — this time successfully. She has a healthy boy, thanks to scientists who developed a dependable blood test, to "Miss Carolyn" and her assistants who performed the tests so reliably, and to all who aided in developing and giving effective treatment.

Extra — A Little Human Interest Story

It was Monday noon and the hour for staff meeting in the Jacksonville laboratory. The technical paper and discussion had just concluded. "Miss Jeff," Chief of Bacteriology, had a word. There was a little problem. The workers in the supply section could not assemble data slips and carbon inserts in adequate volume. (These data slips are wrapped around each specimen, and show the name, address and other necessary information about the person submitting the specimen). The problem could be solved if all technical and clerical workers kept a supply of unassembled slips at hand — and prepared these in any slack moments.



They had a good time and were busy and useful too.

For Ethel, as for most of the laboratory workers, there never seemed a free minute. But there was time to express and act on an idea. Her children would enjoy folding slips and inserting carbons. She would take home a box full and see. Two mornings latter, to the amazement of all — Ethel brought back the box with one full week's supply of slips all prepared. Homework in the laboratory family! It certainly was appreciated. How one wished that the washing of glassware, preparing media, assembling of mailing containers and the other major tasks in supply could be aided in some equally pleasant and effective manner. For there is never enough money to employ all those needed.

This is but a sample of time-consuming tasks involved in making laboratory service readily available throughout the State.

People Do Have Worms

Miss Carter, the public health nurse, had apparently been in the schools again. A large box with 134 stool specimens to be examined for intestinal worms (parasites) arrived in the laboratory. Each bottle was carefully rolled in newspaper; the information slip with the child's name, age and grade was wrapped around outside. There were no soiled slips. It was a pleasure to do laboratory work for those who showed care in submitting specimens.

The usual test for intestinal parasites is relatively simple. Worms live in the intestine securely attached to its inner wall, but microscopic eggs of characteristic appearance are passed with the bowel movements. The test is a microscopic search for the eggs of worms — or the cysts of amebae. A helper prepares the specimen for examination. The microscopic search is made by professional workers carefully trained in parasitology.

Eggs and cysts are relatively light and are concentrated by "flotation." A portion of the stool specimen is mixed with a zinc salt solution, of an exact concentration. A thick sample in a test tube is centrifuged at low speed for a short time. All heavy particles in the feces collect at the bottom, but the light eggs rise to the surface. The tube is gently filled until the surface rises slightly above the rim. A glass slide is touched to this and the surface fluid with the eggs is removed. This is the specimen that

ROUNDWORM



egg



worm

ASCARIS LUMBRICOIDES
popularly known as
"STOMACH" or "ROUND" WORMS

HOOKWORM



egg



worm

NECATOR AMERICANUS
popularly known as
"HOOK WORMS"

is to be examined. The test consists of looking at the material on the slide through a microscope. Small area after small area is viewed to see if worm eggs — or cysts — are present and if so, to identify these. This procedure — so simply stated — is learned only through months of experience. Among the 134 children from Miss Carter's school, 94 were positive for hookworm — and other kinds of worms (parasites) were present in a small number of the children.

This was only a small part of a day's work in the laboratory but it had to do with the welfare of our children in one rural area. Working together, the county health department and the laboratory provided a needed service.

In Conclusion

These then are the fields of activity in a PUBLIC HEALTH LABORATORY. In bacteriology, with diverse technics, one searches for and identifies disease-producing germs. To aid in the diagnosis of tuberculosis, diphtheria, typhoid, dysentery, gonorrhea, malaria, undulant fever and other infectious diseases we search for bacteria and protozoa which cause these diseases. In parasitology, one looks for and identifies the eggs of the intestinal worms. Serology measures and interprets specific changes in the blood caused by specific diseases. This is of first importance as an aid in the diagnosis of syphilis but is used regularly in many other infections. Sanitary bacteriology looks for danger signs which indicate a possible risk of the spread of disease. Drinking water, pools, beaches, rivers and lakes are tested; milk, other dairy products and foods must be examined regularly; probably in the near future the cleanliness of eating utensils in public restaurants will be measured by laboratory tests. Chemistry has diverse responsibilities — which aid law enforcement officials as well as physicians.

May we conclude your visit to the laboratories as we do those of groups visiting in person? "Do you have any questions?" If so, drop us a letter and we shall be glad to answer it.



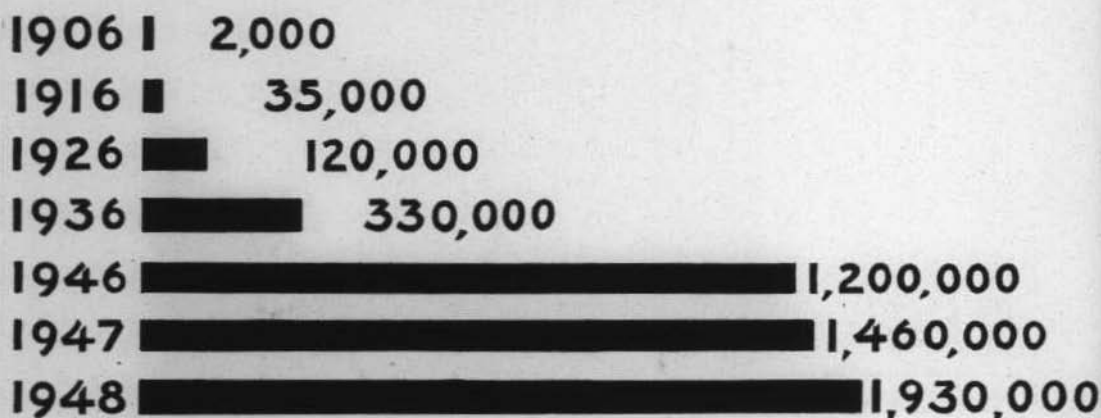
It takes many people with different types of training to perform the work of a laboratory. This picture shows the staff of the central laboratory in Jacksonville. There are state laboratories also in Tallahassee, Pensacola, Melbourne, Orlando, Miami, and Tampa. The gentleman with the black tie standing in front is Dr. Albert V. Hardy, Director of the Laboratories.

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THE GROWTH OF YOUR STATE LABORATORIES

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Florida **HEALTH NOTES**

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The State Board of Health

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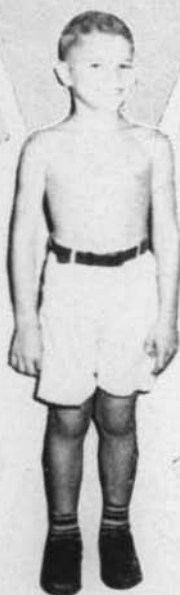
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Florida **HEALTH NOTES**

No one has ever been well nourished just because — nutritionally speaking — he knew all the answers. Unfortunately, our bodies can't build or repair themselves with knowledge alone. If we want to improve our health through better nutrition, we must learn what to do and then do it.



IN THE HUB—A WELL-NOURISHED BODY

THE STORY OF LEON ALLEN

When we first began our studies on the relationship of hookworm disease to anemia, we worked in Hamilton County. In the Jasper Colored School we found a ten year old boy, Leon Allen, whose hemoglobin was so low that his blood was pink rather than red.

In simple terms hemoglobin is the "red" of the blood. A person is said to be **anemic** when there is not enough "red" or hemoglobin in the blood.

But to get back to Leon. His actual hemoglobin level was 2.8 grams per 100 cc., which is about 1/5th of what it should have been. At first we did not believe our eyes so we made several additional tests to be absolutely sure that there was no error for we had never seen such a low hemoglobin in any person outside of a hospital — and not many of those. Out of some 30,000 tests done during the last few years, this is the lowest hemoglobin level (severest anemia) of any child tested in Florida.

At the time of the testing Leon was in the third grade. We talked with his teacher and learned that he was usually very sleepy throughout the school day; in fact, it was almost impossible to keep him awake. During recess, he wouldn't play, but would lie down under a tree and rest. He couldn't run across the school yard without getting out of breath. His attendance at school was very irregular. He had to walk two miles each way and on many days he did not feel well enough to do this.

He seemed to have the potentialities of a bright boy, but was doing very poorly in school. Obviously, he could not sleep most of the school day and do well in his studies. We immediately suspected Leon of being heavily infested with hookworms. This turned out to be true. We also suspected that he was not eating properly. He had little appetite and seemed to feel sick most of the time. A careful check on his meals proved his diet was not adequate.

When the nurse talked with Leon's father she learned that Leon acted at home much like he did at school — was unable to do any work at all, and had a poor appetite. His father said that several times he tried to work with him in the fields, but every time Leon either fainted or collapsed.

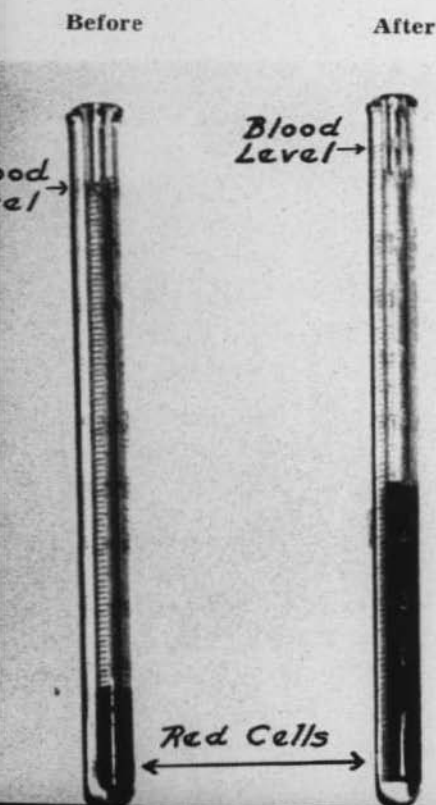
The father was interested in what was causing Leon's trouble and we told him it was caused by hookworm disease and lack of proper food. He asked us what could be done about it. We suggested that we give Leon special feedings at school to see if we could improve his blood before he was treated for hookworm disease.

The boy's teacher and the principal of the school became interested in him. The home economics teacher offered to have her students take turns giving Leon two special feedings during each school day. The home economics girls immediately took to the idea. The whole plan was explained to Leon and he agreed to eat the food whether he liked it or not. Feedings were begun using foods high in protein, minerals, and vitamins such as milk, cheese, eggs, meat, and peanut butter. After two weeks of such feedings, Leon's blood had improved a great deal, but was still very low in hemoglobin. After two more weeks, still more improvement was noted. The "redness" of his blood had doubled during these first four weeks. Everybody began to notice the change in Leon — he was staying awake in school and was playing during recess.

At this time we decided Leon should be treated for hookworm disease and this was done. The feedings were continued for another month and at the end of this time his hemoglobin was **three times as high** as it had been at the beginning.

Leon's appetite had improved so much that he agreed to be responsible for his own food and to eat at home the foods we recommended. He continued to improve, and at the end of the school year could truly be said to be a new boy. At this time his father stated that he was beginning to be of great help on the farm. His school work had improved and he was playing on the school grounds just as normal children do.

Before Leon received treatment his blood was very low in red blood cells (dark part at the bottom of the tube). With good food and hookworm treatment the red cells showed a great increase.



Leon Allen, once unable to work or keep up in school, is now a healthy, happy boy, able to do a good day's work.



Two Years Later

Two years later, when working in that area, we stopped by to see how Leon was getting along. His father said that he was working in the field and doing a man's work. As a matter of interest we dropped in to see the owner of the farm on which Leon's family works. He stated that Leon was doing excellent work and that he had never seen so much improvement in one person. He said, "If this is an example of what public health can do, I'm all for it."

On this visit we checked Leon's blood again and found it to be up to normal — in fact, higher than the average for other children in that area. His hemoglobin was **five times as high** as it had been when we first saw him — 14.0 grams per 100 cc.

THERE ARE OTHERS, TOO

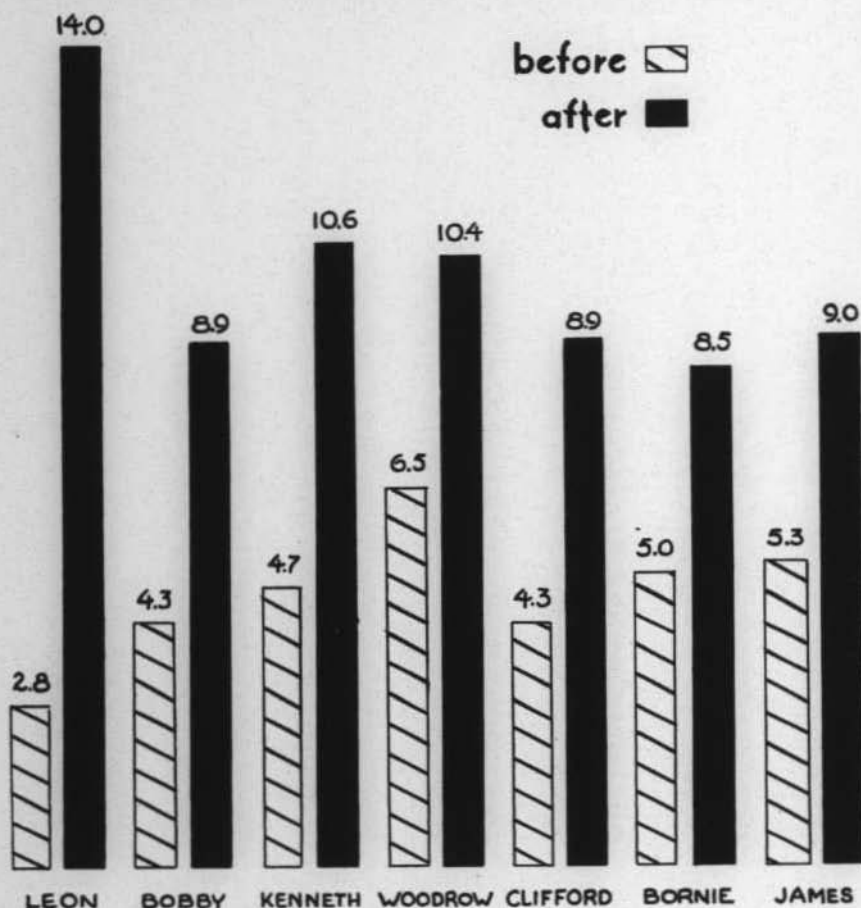
Unfortunately, many Florida school children, both white and colored, have the kind of anemia that Leon had (although not to that degree). It is due to malnutrition **plus** hookworm infestation. Such children will improve if given hookworm treatment **or** if given food high in protein, vitamins, and minerals. They improve **more** if they are **both treated and fed** correctly.

Hookworm disease and malnutrition go hand in hand. Seldom do we see a child with hookworm disease who is not also malnourished because of poor eating habits. Just as we did with Leon, we have fed experimentally more than twenty severely

anemic children and every one has shown a remarkable increase in hemoglobin level **even before** he was given the usual hookworm treatment.

The hemoglobin levels at the beginning and end of the feeding periods of the most anemic of these children are shown in the accompanying diagram.

HEMOGLOBIN LEVELS OF SEVEN ANEMIC CHILDREN BEFORE AND AFTER SPECIAL FEEDING PROGRAM



NUTRITION AND THE SCHOOL CHILD

What is good **nutrition**? The eating and use by the body of the kinds of food that help promote the highest level of physical and mental well-being.

What is **malnutrition**? Faulty or imperfect nutrition.

THE QUESTION

When is a child malnourished? When he is starving — or when he fails to reach the best nutritional condition possible — or is it somewhere between these two extremes? Such questions are important. We hear widely different statements as to the prevalence of malnutrition among school children. All stages of nutrition are found in the school population of Florida.

How many school children in your area are malnourished? Which ones? How serious is it? How many so-called "normal" children are below par from a nutritional standpoint?

In approaching any health problem, we must be armed with facts. This is true in making an effective attack on nutrition problems.

SIGNS OF MALNUTRITION

Some physical signs which suggest malnutrition are, in brief: chronic fatigue, bad posture, pallor, rough skin, sore bleeding gums, red or purple tongue, crusty eyelids, burning or itching eyes, and eyes which are sensitive to light.

Other signs and symptoms which suggest nutritional difficulties and which parents and teachers can observe are:

- lack of appetite
- failure to eat adequate breakfast
- failure to gain steadily in weight
- loss of strength
- backwardness in school
- nervousness and irritability
- repeated respiratory infections
- burning, prickling of skin
- muscle and joint pains, muscle cramps
- chronic diarrhea.

NUTRITION IN YOUR COMMUNITY

These conditions affect the health of school children. They also reflect the nutritional status of the families of these children. Therefore, a study of community nutrition problems can be done very effectively through observation of school children.

This study of school groups offers an ideal opportunity for public health nutrition work because school children:

- reflect community conditions
- are already organized into groups
- have "plastic" habits
- are teachable
- reflect changes quickly
- can be observed over periods of time
- are available and organized for educational "follow-through."



The doctor can learn a lot about the nutritional condition of a child by looking in his mouth.

Behind the Scenes

A knowledge of the general background of the community is an important part of a nutrition survey. For example, you will want to know:

- general educational status
- general economic status
- prevailing food patterns
- racial practices and prejudices
- per capita milk consumption
- availability and adequacy of food markets
- adequacy of gardens (or food crops)
- school lunch facilities.

The Teacher's Part

Many teachers are quick to cooperate and lend their support toward solution of health problems. They can obtain data on the types of lunches being purchased in lunchrooms, absences due to sickness, and children with symptoms suggesting malnutrition. Home economics teachers can give help with nutrition information quizzes and with the study of cooking practices in the home.

The school health record cards of school children usually deal mainly with the communicable diseases which they have had and their immunization histories.

Often nothing is said regarding the current nutritional status of the child. Questions which might be asked of the parent and teacher are:

- Does the child eat 3 regular meals a day?
- Does he usually eat breakfast before coming to school?
- Does he eat an adequate lunch at school?
- Does he seem to have a good appetite?
- Does he drink milk each day?
- Does he eat a green or yellow vegetable each day?
- Does he eat a fruit each day?
- Does he seem to have normal "energy"?
- Does he play "vigorously"?
- Is he mentally alert?
- Can he concentrate normally?
- Do his eyes seem to function normally?
- Has his weight gain been normal?

PUBLIC HEALTH NUTRITION

At present few health departments are equipped or staffed to carry out extensive laboratory procedures for nutrition studies. However, the hemoglobin test is practical for use on school children. This test is made on a small amount of blood from a prick of the finger. A team of 3 or 4 people can make 200 or 300 such tests at a school during one day. **Studies of hemoglobin levels, (measurement of the red content of the blood) among Florida school children indicate that anemia is very common.**

DIET RECORDS

Diet records can be of great value in nutritional studies. In some school classes, the pupils keep records of all food eaten for one, two, or three days, or a week. When such records are studied they give a fair picture of the food habits of the group for the period covered. Many feel that this is an excellent educational experience for the children as well as a helpful fact-finding device.

One Step at a Time

Nutrition education should be based on conditions actually existing in the community. Facts brought to light by the procedures described above should serve as guides in developing preventive and corrective plans which are educationally sound. Then:

1. Get at the basic cause.
2. Make allowances for racial, familial and individual preferences.
3. Advocate only those corrections that are **within reach** of the group.

We must look to agriculture for an adequate supply of the foods which provide essential nutrients. We must look to organized education to help stimulate in the child a desire to do those things necessary for good nutrition. Only the health departments can get the basic facts about the health status of large groups of school children as affected by the food they eat. We must look to them to collect these facts and to furnish information



No fear here. Children watch with interest while the doctor takes samples of their blood.

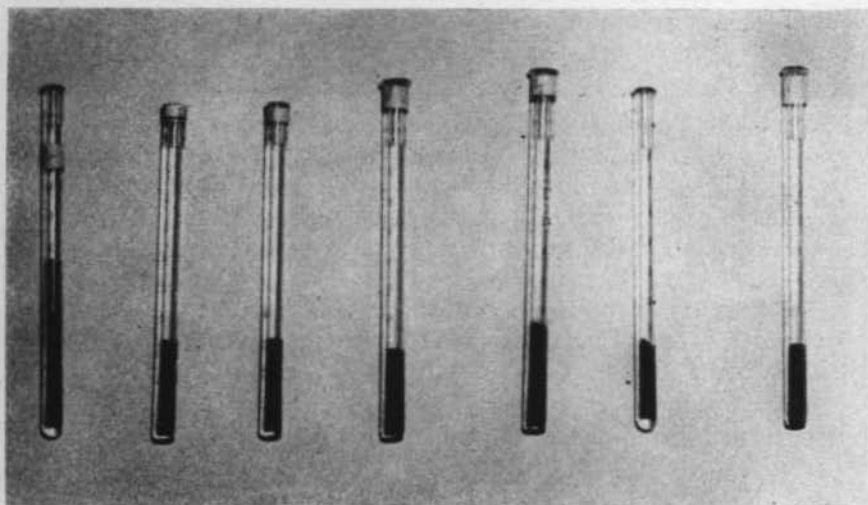
concerning malnutrition in the community. Then parents, teachers, doctors, dentists, nurses, nutritionists, agricultural workers, and others can attack the various aspects of the nutrition problem much more effectively, with far larger forces, and on a much wider front.

ANEMIA IN PREGNANCY

Current investigations show that anemia during pregnancy is very common. A study of this condition is now underway in Gainesville in cooperation with the Alachua County Health Department and the Junior Welfare League.

Thus far, different blood tests have been made on over 200 women in various stages of pregnancy. Repeated tests have been made on many of these women. The great majority have been found to have hemoglobin levels below normal. About half have levels which could be called "anemic."

These low hemoglobin levels normally go hand in hand with low red blood cell counts and low red cell volumes. The latter is shown in the accompanying picture.



The dark portions at the bottom of the tubes are made up of red blood cells. The first tube shows normal red blood cell volume which should be almost half. The other tubes show low red cell volumes so often found in the blood of pregnant women.

The pictures on this and the following pages show some of the activities in connection with the program.



In the top picture blood tests for anemia are being done in a prenatal clinic. The patient's diet is also being discussed.

Below, a midwife and her patient receive special instructions about the importance of food during pregnancy.





In prenatal clinics weight is regularly checked.

A public health nurse is teaching a class of prospective mothers about good diets in pregnancy.

NUTRITION INVESTIGATIONS AND SERVICES

The demand for nutrition work in Florida has grown during the past two years. This has occurred even though the average family income has been at an all-time high. This does not mean that malnutrition is on the increase but rather that more people are recognizing the role that nutrition, good and bad, plays in determining the health level, efficiency, and life span of both young and old, both rich and poor. The health workers and the private citizens of Florida are showing increasing interest not only in the prevention of malnutrition but in the advantages of good nutrition. The emphasis is shifting from "avoiding something" to "gaining something."

This does not mean that the problem of malnutrition has been solved — far from it. But it shows a growing realization that nutrition is something that affects all of the people all of the time for better or for worse.



During times of economic prosperity the occurrence of the severer nutritional diseases usually decreases because more people have more money to spend for food. In spite of painfully high food costs, there are indications that the average Florida family is as well fed as it was before or during the late war. Someone has said that poor nutrition is due to the three I's: income (low), inertia, and ignorance.

There is good evidence that each of these is yielding to the efforts of the various agricultural, educational, and public health workers as well as to the work of many other interested groups and individuals.

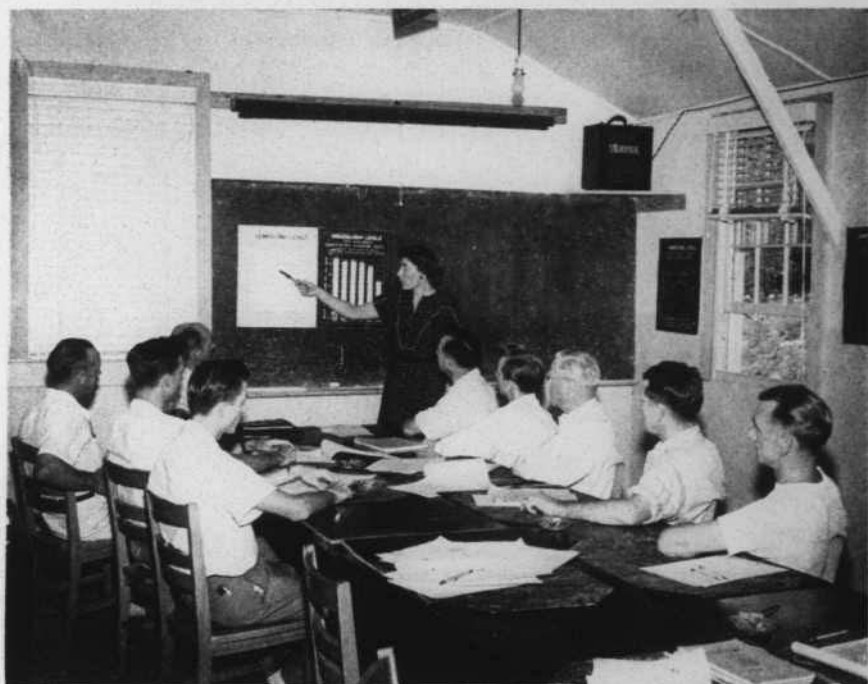
The name, Nutrition Investigations and Services, indicates the dual nature of the public health nutrition program in Florida. The investigative work during 1949 has continued along the lines begun three years ago. The service phases are largely educational in character. Emphasis is being placed upon ways of presenting information which will generate a desire to "use what we know" about nutrition.



Public health nurses are getting the latest scientific information on nutrition.

NUTRITION EDUCATION

In a broad sense, the entire program is educational in nature since, in the course of investigative work, every opportunity is grasped to create interest in the work that is in progress. It is felt that sometimes more actual "learning" occurs under such conditions than takes place with some of the more conventional methods of teaching. For example, those who have seen it have been impressed by the interest shown by school children of all ages in the tests that are done on their blood. The hemoglobin test is rapidly becoming known as the "red test." How red is my blood? Why is my blood "low"? What can I do to get it red like it should be? Is Johnnie's blood better than mine? These types of questions are frequently heard by staff members doing hemoglobin and other tests in the schools. If we had the answers to all of the questions the children ask, there would be no need for further nutrition investigations in Florida. What better teaching opportunity could one ask for?



A nutritionist and a group of sanitarians discuss the importance of good sanitation AND good nutrition in preventing and overcoming the severe anemias so often found in children infested with hookworms.

NUTRITION INVESTIGATIONS

EYE CONDITIONS: Several abnormal eye conditions have been found to be prevalent in some areas. Among these are "poor eyesight" or decreased visual acuity which is all too common in all areas and among all groups. How much of this stems from or is related to nutritional conditions is not known. Extensive studies of this problem are in order and are being planned.

Follicular conjunctivitis (granulated eyelids) is found to occur in as high as 70% of the children in some schools. On the other hand, almost none is found in other schools. Why? We do not have the answers. Several years ago studies conducted by the School of Home Economics at Florida State University suggested that this condition is related to vitamin A intake. A few preliminary tests by our staff have given variable results.

In order to get more definite information on this problem a cooperative study has been conducted by the Florida State Board of Health and Florida State University. In the fall of 1948 a survey was made among the white school children of Leon County to determine the incidence and degree of severity of the condition. Over 2,600 children were examined and the following findings on follicular conjunctivitis recorded:

	Number	Percent
Children Examined	2,614	100
Children free of Follicular Conjunctivitis....	1,343	54.6
Children with Follicular Conjunctivitis.....	1,113	45.4
Mild	912	37.1
Moderate	166	7.0
Severe	35	1.4

Thus, over 45 percent showed some degree of follicular conjunctivitis.

Between 350 and 400 children were selected for the study. These included most of the severe and moderate cases and over 100 children whose eyelids appeared to be normal. Letters were sent to the parents of these children offering them the opportunity of participating in the study. Visits were also made to some of the homes. The response by both parents and children was almost 100%.

Blood studies were done on both groups to determine the amount of vitamin A present. Therapeutic tests with vitamin A, carotene, and other substances were continued until May, 1949. Every school day the participating children of each school were met in the lunchroom by a worker who "administered" the vitamins, watched each child gulp down his test dose, and recorded the event on the permanent record.

Whether it will be necessary to continue the work for another year cannot be determined until the data from the study is completed and reviewed.

ACNE: The studies on acne which were begun in 1947 were continued in 1948. Most of this work has been done in Leon High School and the Elks Club of Tallahassee has assisted in purchasing some of the test materials. Over 200 students participated in the study. All students were carefully examined on two separate occasions before the therapeutic testing was begun. They were divided into three groups of about 75 students each. Cases of different degrees of severity were equally divided among the three groups. The three groups were placed on different combinations of supplements. Each student reported to the nutritionist at the school clinic every school day (five times per week) to take his test dose.

The testing continued for a period of twelve weeks. During this time records were kept of all procedures, absences, etc. As in the previous year, the examiner in doing the final check-up did not know to which group any student belonged.

The results indicate that multiple vitamin supplementation would be a reasonable supportive measure in the treatment of acne. However, there is no thought that it should be considered primary treatment itself. The results of these tests do not indicate that acne is a "sign of" or due primarily to malnutrition. They do indicate that supplementation with certain nutrients is helpful.

ANEMIA: The blood studies on anemia and sub-optimal hemoglobin levels have been continued. Therapeutic testing previously done with iron alone has shown little evidence of increasing such hemoglobin levels. A group of children in Hillsborough County participated in a study to determine whether **iron and copper** supplementation would elevate sub-optimal or anemic hemoglobin levels. Children from the first through the fifth grades were included.



Visitors from India are interested in Florida's nutrition program.

Several separate hemoglobin tests were done on each child at the beginning and at the end of the testing period of 9 weeks. Although this study was purely preliminary, the results show that, under the condition of the experiment and in the amounts given, there was no elevation of hemoglobin level as a result of the supplementation with iron plus copper.

A comprehensive study of anemia and sub-optimal hemoglobin levels in pregnant women is underway.

NUTRITION SERVICES

The requests for educational and demonstration services have continually increased. Staff members have taken part in numerous meetings, conferences, teacher workshops, lunchroom workshops, agricultural meetings, and dietetic and home economic meetings within the state. Numerous conferences on nutrition and related problems have been held with public health workers from all sections of the state.

The director, in his capacity of chairman of the Nutrition Committee of the American School Health Association, has kept in touch with nutrition activities in school health programs in different sections of the United States. In spite of the smallness

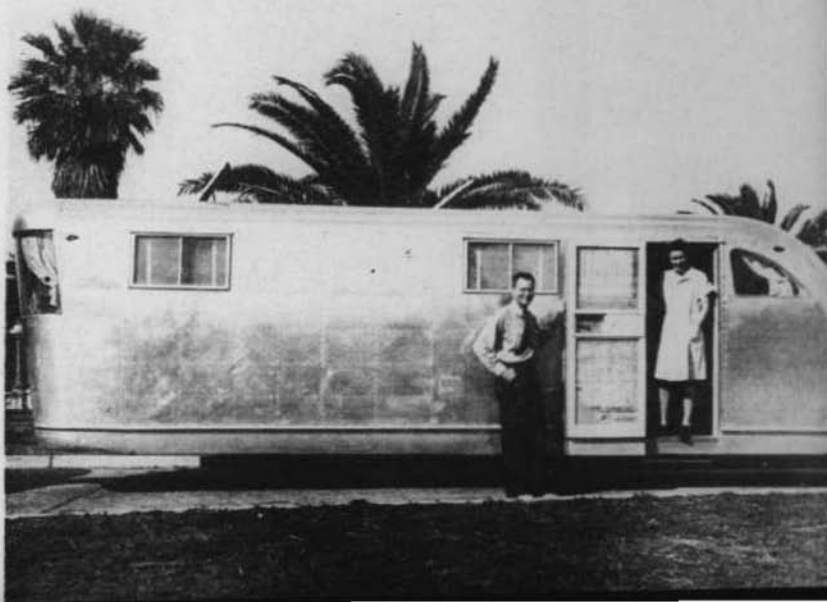
of the staff in proportion to the problems we face, it is felt that definite progress is being made among the school children of Florida. A large part of this is being accomplished by the lunch-room workers and teachers all over the state.

A nutrition manual for use by nurses is being prepared in cooperation with the Division of Nursing. The plan is being worked out to give every public health nurse in the state an opportunity to indicate what type of manual she would find most useful.

Enrichment of flour, bread, grits and cornmeal has been encouraged. At present Florida is the only state in the deep South not requiring such enrichment. It is hoped that Florida will soon have this progressive legislation and thus benefit along with 25 other states, from the knowledge that modern science has placed at our disposal.

During the year the unit has had numerous visitors from all over the world including Egypt, India, Canada, various South and Central American countries, as well as from many sections of the United States.

This familiar nutrition laboratory trailer has been seen in many parts of Florida.



• **WHAT WE** *Eat* •
HAS A LOT TO DO
WITH HOW WE *Feel*

HOW WE FEEL
HAS A LOT TO DO
WITH
HOW WE *Look*
• • • **AND** *Act* • • •